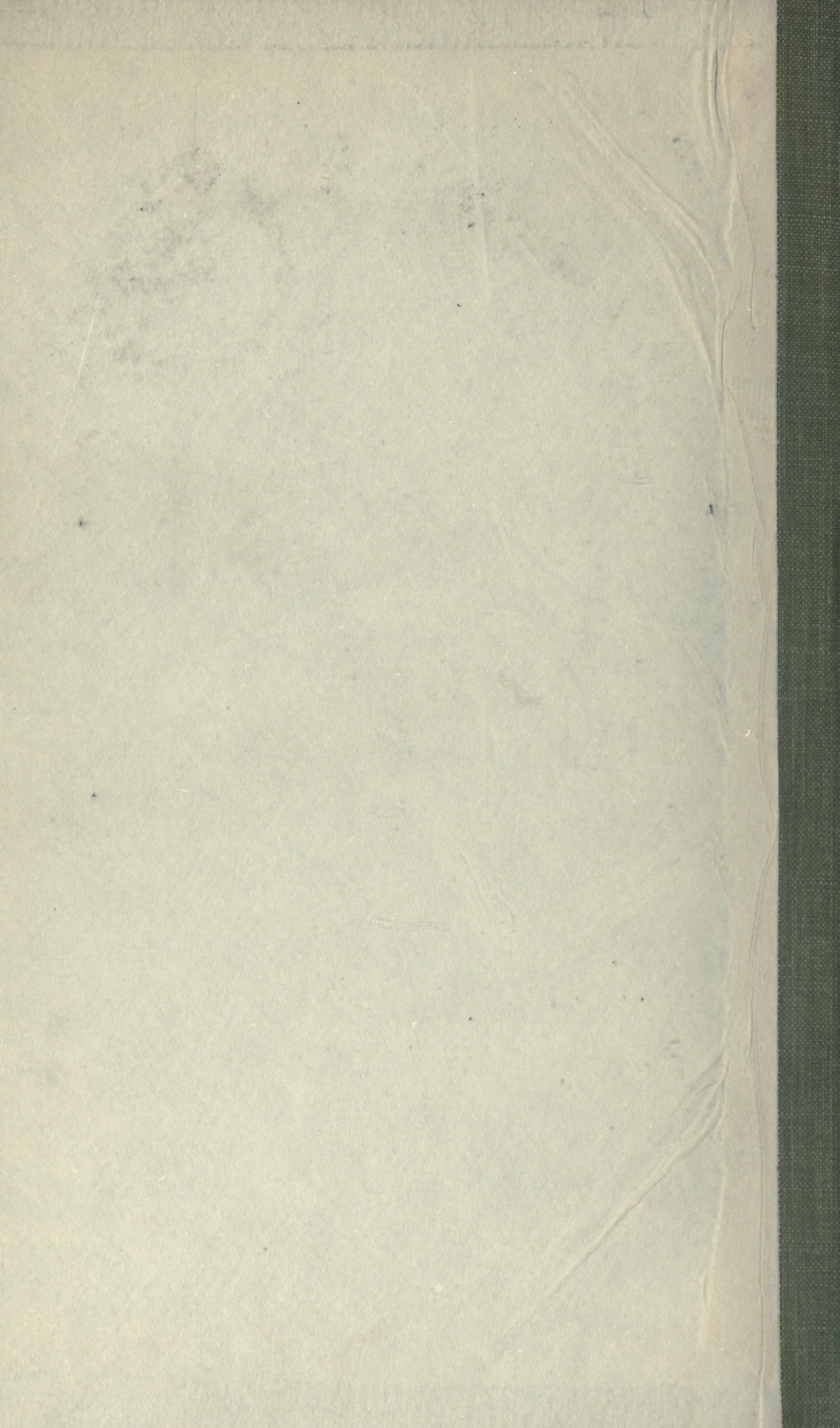


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The Official Organ of the  
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DR. GORDON BATES

Editor

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# The Public Health Journal

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No. 1

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## The Tuberculosis Problem in Canada

BY GEORGE D. PORTER, M.B., *Secretary of the Canadian Association for the Prevention of Tuberculosis.*

Read before the Section of State Medicine, Academy of Medicine, Toronto,  
November 30th, 1920.

CANADA, like other countries, has its own tuberculosis problem, but, with its scattered population of less than nine million people occupying over half a continent, under climatic conditions offering extremes of heat and cold, our problem presents difficulties peculiar to itself.

Its solution will require here, as elsewhere, the combined efforts of the Government, the medical profession and the people generally for, while the disease itself is a medical problem, its prevention and control is a social one as well.

We are fortunate in having a death rate from this disease much less than that of many of the European countries, and Canada stands about fourth in the lists compiled from all countries. While the mortality tables for Canada are not as complete as they should be, the estimated annual number of deaths from tuberculosis based on those reported and estimates in other sections where reports are not available now amount to 9,096. In the Dominion census for 1901 the deaths were estimated at 9,709. As the population then given for the Dominion was 5,371,315, and the estimated population for Canada is now over 8,000,000 we find a decrease in the death rate from tuberculosis during the past two decades of over thirty per cent. This decrease, I take it, is due to three factors. First, the lessened infection in the homes from which tuberculous patients have been removed to hospitals and sanatoria. Second, the earlier recognition and the earlier and better treatment of patients both in their homes and in sanatoria. Third, the better home and living



conditions, especially in regard to ventilation, sanitation and personal hygiene. I believe, however, that, while there is this decline, there have been, and still are, more deaths from tuberculosis than are so reported.

One might think that our scattered population would lessen its incidence, but we find, unfortunately, the same tendency towards overcrowding and bad housing conditions on the prairies as in our older and more densely populated eastern centres. If, as Calmette said recently, "Our guiding principle in the social campaign against tuberculous is the protection of the healthy subjects, whether infant or adult, against massive or frequent infections," housing conditions must receive more attention than they have in the past. One hears of "Lung Blocks" in great cities, but the results of mass infection in overcrowded houses in our rural communities may be seen in different parts of Canada. As an extreme example we might point to one institution, an orphanage, where ninety per cent. of its inmates, all children from four to thirteen years of age, are tuberculous. Fifteen per cent. of these show active disease. Twenty-three of them died within a period of eight months. The rest of the children are glandular cases. About half of these orphans are children of parents who have died from tuberculosis and who have most probably infected them before their deaths. The only other explanation for the prevalence of tuberculosis amongst them is from infected milk. In either case much can be done by concerted action of medical, social and governmental co-operation.

Krause lays special emphasis upon the value of social betterment and raising the standard of living to fortify against the disease, but efforts in both directions are essential. We must lessen infection by proper care of the patient, either in hospitals and sanatoria, or in the home, thus protecting those exposed, and fortify the general health of the children by personal hygiene and proper food.

While the voluntary social agencies have done much in this general campaign it must be evident that the official health authorities should be responsible, and all social work should be in co-operation with them.

That this has not been clearly recognized before may be due to the fact that practically all our sanatoria have been initiated by voluntary associations, and great credit is due to them. The first such was the National Sanitarium Association, which began its work in 1896 at the Muskoka Sanatorium, and this has grown so that now that organization is looking after the accommodation for



some 800 patients there and at Weston. Many other societies have also done splendid work. In 1900 there were beds available in Canada for less than a hundred patients, while now there are over four thousand beds available. Seventeen hundred of these were added by the Federal Government under the Military Hospitals Commission, now the Department of Soldiers' Civil Re-establishment, and they have also done much towards increasing the general efficiency of our institutions. It should be borne in mind, however, that but for the sanatoria scattered throughout Canada previous to the war, no beds would have been available for our tuberculous soldiers when needed for them on their return.

The Canadian Association for the Prevention of Tuberculosis with the numerous local associations throughout the Dominion have done a large amount of educational work during the past twenty years, and as a result dispensaries, preventoria, sanatoria, hospitals and laboratories have been provided in various centres. Much legislation, such as notification, anti-spitting by-laws and disinfection has been passed. The Federal Government supports this Association which works in co-operation with both the Federal Department of Health and the various Provincial health authorities, all of whom are represented on its executive. (This year the Federal grant was supplemented by another from the Red Cross Society.) Apart from this work the Federal Government does nothing for the tuberculous civilians, although it looks after the tuberculous soldiers. In regard to bovine tuberculosis, however, the Federal Government has taken steps to prevent the spread of bovine tuberculosis through milk from infected cows. An order-in-Council, passed under the Animal Contagious Diseases Act, has been passed providing for the co-operation of the Federal authorities and the cities and towns all over Canada for the eradication of bovine tuberculosis from herds supplying milk to such municipalities. It is specified that the city or town must first provide for licensing all milk vendors, for clean and sanitary dairies, for the prohibition of the milk sales within two years of the test of the cattle of any dairy unless a clean bill of health is shown, and for the appointment of a municipal instructor. On fulfilment of these conditions and on application being made by the municipal authority to the Veterinary Director-General, Federal inspectors will be sent to make tuberculin tests. Any diseased cattle may be slaughtered, and compensation to the owners is to be allowed at the rate of one-half the appraised value of the cow in a case of open tuberculosis, and one-third value if destroyed as a reactor at the



request of the owner. No compensation is to be paid to the owner unless, in the opinion of the Minister of Agriculture, he assists, as far as possible, in carrying out the instructions of the inspector as to disinfection and other necessary precautions.

As a result of a recent conference in Ottawa between representatives of the producers, packers and the Dominion Department of Agriculture it will likely be recommended that the charge of one-half of one per cent., levied on all animals entering the stock yard, be diverted insofar as it affects animals which are not slaughtered, and the proceeds used to combat tuberculosis among animals.

To return to our civil population, however, the care of the sick is not considered a matter for the Federal Government, but is left to the provinces and municipalities. We find, therefore, a diversity in the methods of caring for tuberculous patients in our nine different provinces. Ontario, up to the present time, leads the way insofar as expenditures and results are concerned. This Province offers one-fifth the initial cost of a local sanatorium up to four thousand dollars, and five dollars and twenty-five cents a week for each patient towards maintenance. This is augmented by from four to seven dollars a week from the municipalities and the remainder is received from the patients themselves and from private philanthropy. Some of the other provinces have followed this plan more or less closely. Others have made special grants of varying amounts to their sanatoria, but in the West a general tax from all ratepayers for the cost and support of their hospitals is favoured.

It must be remembered, however, that only about fifteen per cent. of the tuberculous can now be accommodated in our sanatoria, and that the rest must be treated in their homes. Here the value of the work of our district nurses is shown, and an increasing number of such are being employed in the different provinces every year.

One of the effects of popular education regarding the benefits of fresh air and sunshine in the treatment as well as in the prevention of tuberculosis is seen in the increased number of sleeping porches and balconies in our homes, and in the special open air pavilions and open air school rooms in our hospitals, asylums and schools.

According to Osler, the tuberculosis problem is a medico-sociological one. "On paper the problem looks simple—to put all in healthy environments, with good housing and proper food, which are essential preliminaries to healthy habits; to recognize the disease early and to put patients in the best possible circum-



stances to promote cure, and to guard the community against dangers associated with advanced incurable cases. The first is a basic, economic question—re-housing will take at least a couple of generations. An abundant supply of good food means better wages, and a stricter protection against external contamination. The second is met by efficient home treatment and by hospitals, dispensaries and sanatoria. The third by a closer supervision of dangerous cases, and better provision for their segregation.”

This well summarizes the tuberculosis problem in Canada as it does elsewhere. If, then, the steps essential for its control involve a proper survey, a dispensary system and home nursing as well as hospitals, sanatoria and preventoria, a pure milk supply, and also much better housing and school conditions, how can we obtain these without education? And for that great work, as well as the personal care of those who are ill, we look to the medical profession for leadership and help.

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# The University in Relation to Nursing

BY MISS ETHEL JOHNS, Vancouver, B.C.

Read at the Joint Session of the Canadian Public Health Association with  
British Columbia Hospital Association, June 23rd, 1920.

THE purpose of this sketch is not to give a survey of education in general and nursing in education in particular. It will not compare nor appraise the departments of nursing now existing in various universities, on the American continent. The historical aspect of the movement toward the higher education for nurses, fascinating as it is, cannot even be touched upon. It takes no cognizance of statistics though these are available. All I can hope to do in the brief time allotted me is to demonstrate to you the crying need for the broader education of nurses in Canada to-day. If at the same time it can be shown that the universities of our country are the logical centres for such education, I shall be satisfied. If further it shall appear that those who urge this reform are neither wild eyed enthusiasts nor sentimental theorists, but women, who, to paraphrase Kipling, "Be neither saint nor sage, but simply those who do the work for which they draw the wage"—why, then, I shall have succeeded beyond my best expectation.

The education of nurses has received more attention in the last five years than during any previous period in history. The reason is simple. Whether nursing is or is not a profession, is a debatable question, but that it is a vital art bearing upon life has been amply, even tragically, proven during the war, and the epidemics which followed it, and during the period of so-called reconstruction through which we are now passing.

This focussing of public interest has shed upon us a light that is somewhat disconcerting. The veil of sentimentality disappears and we appear as we really are—a group of community servants, entirely well intentioned, but more or less ill prepared for our task. The enquiry now being conducted by the Rockefeller Foundation regarding nursing and the education of nurses will entail some extraordinary revelations, but it cannot fail to demonstrate the one salient fact that the policy of "laissez faire" in nursing education is discredited by its results and that a sane sound reasoned plan needs to be formulated and to be put into operation under able leadership as soon as may be.



Present conditions in nursing education in Canada may be rapidly summed up as follows:

In Canada to-day any person or group of persons may assemble a number of sick people under a roof and call that place a hospital. Further, they may inaugurate a nursing school, may offer to young women instruction in one of the most vital and difficult of arts. It would be reasonable to suppose that before so doing it would be necessary to assure some competent educational authority that conditions in that school were such as would ensure the pupil competent instruction and proper living and working conditions. Such is not the case. The only point in which specific legislation exists in most of our provinces is that a certain minimum number of beds—*beds*, mark you, *not patients*, must be available before a training school is established. And what is that minimum? In some provinces as high as twenty-five, in others as low as five. No mention of qualified instructors, no restriction as to hours of duty, no provision for teaching equipment—just beds and pupils. The fact that many hospitals, large and small, do their best to keep faith with their pupils, is beside the point. They do so of their own free will. They are not obligated so to do. No competent authority at present exists which guarantees that pupils entering training schools will receive sound systematic instruction in their chosen calling. An attempt has been made by associations of nurses to lay down certain standards and to conduct inspection. This is a move in the right direction. Inspection will doubtless help to standardize conditions in our schools, but inspection must carry with it more authority than at present, or its usefulness is limited.

What does the hospital exact from the pupil in return for unstandardized instruction? It exacts three years of disciplined service. I would like to emphasize that word *disciplined*. Pupil nurses constitute one of the few remaining *disciplined* groups in the chaos of our modern civilization. True, discipline, even in schools for nursing is much more lax than in former years, but still the organization of most training schools remains essentially disciplinary. The value to the hospital of this condition of service, I had almost said servitude, is incalculable, but unfortunately the hospitals have been tempted to exploit it to such an extent that it is becoming more and more difficult to recruit pupils except for such schools as are known to be able and willing to maintain high standards. The proverb of the killing of the goose which laid the golden eggs has never been more aptly illustrated than in the present shortage of pupils, a direct consequence of the old methods of ex-



ploitation. It is not just to lay all the blame on the hospitals. In the last analysis the problem is largely economic. The pupil nurse was, and is, a cheap and efficient working force. Relatively few hospitals, large or small, in Canada are established on a firm financial basis. Not the least of their financial anxieties is the ever-increasing salary list. The solution, for the time, was easy, so long as pupils presented themselves for training in sufficient numbers.

Now that they do not—what is to be done? The logical answer is: Make conditions more attractive—but how? Better living conditions, yes; shorter hours, yes; higher money allowances—no—pupils enter for training not as a means of livelihood; what else? More important than all—better teaching—more thorough preparation, wider opportunity for self development, and the last is my opinion the most important of all. Pupils to-day are discriminating, and rightly so. They compare standards in various schools before making application to any. They do not necessarily choose the largest school. Many applicants have said: It is a small school—but they get good teaching there; or, “they offer affiliation in certain branches,” or “the superintendent of nurses is very able—she moulds her women.” Pupils sit in judgment of the educational standards of their school far more than the medical staff or the directorates of hospitals realize.

If good teaching is a factor in the success of any training school it surely should not be difficult to provide *that*. Just get a competent woman for director and she will see about it. But will she? How many competent nurse administrators can teach? How many can plan curricula? Some of them have natural teaching ability—more have not. Even the first group have had little or no opportunity in developing or educating their teaching faculty. Until the department of nursing in Teacher's College, Columbia University opened its doors to women desiring to qualify as nurse teachers and administrators, there was no institution to which women desiring such training could turn. This department was founded by Miss Adelaide Nutting and Mrs. Isabel Hampton Robb, both former superintendents of the School of Nursing of the Johns Hopkins Hospital. This brings me to my real topic, the University as a factor in the education of nurses. All that precedes was background, I hope not unduly black, against which I hope to show the true logic and reasonableness of this modern movement toward the university, a movement which has not been without its critics and detractors. Miss Nutting and Mrs. Robb were possessed of the divine gift of vision. They saw that for good or ill, nursing must



enlarge the place of its habitation. They were besieged with demands for teachers and administrators in schools for nursing. Above all, they realized the necessity of establishing standards. There seemed no logical means of establishing such standards except through an independent educational body such as the university. The modern field of public health and of social service cried out that the harvest was plenteous, but the labourers were few. Women of native ability equipped only with their training school experience were drafted into these new fields, found that their education was inadequate, and looked about for opportunities for post-graduate study. They realized, as Public Health Administrators and Public Health Nurses in this audience must realize, that the curriculum of the training school had not prepared them to cope with the economic and sociological problems with which they were confronted. Where were they to go but to the University? Their training schools had given them all they could. Thus came about the courageous experiment in Teacher's College, which has had such momentous results. Fire from the torch these pioneers kindled has been passed from hand to hand till there are now more than twenty universities on the American continent taking cognizance of nursing education. The most pressing need, that of post-graduate study, had first to be met, but a new development is now in process of taking place. Firmer foundations are being laid. Several universities in the United States and one in Canada, the University of British Columbia, now offer what for want of a better term is called the combined course leading to a degree in nursing. A brief sketch of the course in this university will illustrate the general plans of all. Students must possess matriculation standing. Two full years' academic work is required, during which the student receives instruction in the basic sciences of chemistry, biology and bacteriology, in addition to English history and economics. Before she begins her academic work, or in the interval between the first and second years, she enters an approved training school for nurses, undergoes rigid physical examination, and serves a probationary period intended to prove her general fitness and adaptability for nursing. At the close of two years' academic work she re-enters the training school as a pupil nurse and undergoes two years' intensive nursing training. The fifth year is partly academic and partly field work. During this year she elects one of two majors—either teaching and administration of schools for nurses or public health. At the conclusion of her five years' course she is eligible for the degree in

nursing conferred by the University and for the diploma of the hospital as a graduate nurse. It may, I submit, be contended that a woman possessing training such as this will be capable of enlightened leadership and direction once she has acquired the necessary practical experience in her chosen field. Especially is this true of the field of public health. It is plainly shown at a gathering of this nature what ambitious programmes of public health are being formulated in the various provinces. But where is the nursing personnel to come from? There is not, I am sure, a public health nor hospital administrator within sound of my voice who is not at his or her wits end to solve this riddle of the sphinx. The dearth of women who are able to fill acceptably positions requiring initiative and executive ability is appalling. There are plenty of good nurses, but they have not sufficient educational background to fit them for such tasks, nor in the past has it been possible for them to obtain it. I can speak feelingly for the training schools—competent instructors of nursing are very rare. Teacher's College has now on its books more than three hundred applications for women to fill positions of this kind in all parts of the United States and Canada, which so far cannot be filled because nurses are not presenting themselves in sufficient numbers. The training schools would once have been the only source. Now there is a better one—the training school and the university. The discipline and devotion, the technical training, of the one grafted on the broad culture of the other. Hospitals searching for competent superintendents capable of leadership will look here also. Many a hospital directorate to-day would respond to an appeal for better teaching conditions if their superintendent could formulate such conditions and direct them and carry them through after formulation. Show them what to do and they will do it. It is education for leadership we are striving to obtain, not an impossibly high standard for the rank and file. Not that the rank and file are debarred. Opportunities for post-graduate study are now available in many centres in the United States and also in Canada. During the past winter a short course in public health nursing was given to graduate nurses in Dalhousie University which was a model of its kind. Students in this course were given instruction in economic sociological and scientific subjects, bearing directly upon their work. At the same time they visited the social welfare organizations of the district and were given opportunity for a certain amount of field work. Students who took this and similar courses given elsewhere speak enthusiastically of the inspiration and help it has been to them in



their work. The only fault they have to find is that they did not get enough. The taste for knowledge was aroused, not satisfied. Not for nothing is the motto of the American Association of Public Health Nursing "when the desire cometh it is a tree of Life."

In the United States the experimental stage of the movement towards the university may be said to be passing. It will not be long before the same is true of Canada. Short courses in social service and group lectures to pupil nurses are being given in the University of Toronto. The Universities of Saskatchewan, of Alberta and Manitoba are swinging into line, and even that stronghold of conservatism, the University of McGill, is reported to be considering a department of nursing. As yet, the University of British Columbia is the only one in Canada to offer the course leading to the degree. It has the distinction of being the first in the British Empire so to do. Eight students are enrolled, three of whom will graduate in 1923 as Bachelors of Nursing. It is far too early to gauge results from the Combined Course. We are building here for the future, but we earnestly hope that the foundation will be well and truly laid.

Now, in this connection, a word of explanation is necessary. It has been intimated that the higher education of nurses has its critics and detractors. Let us examine these criticisms for a moment.

One commonly heard is that nurses will become so superior that they will refuse to perform their real function: that of nursing the sick, that they will in the phrase of the street "get too big for their job." If by that is meant that many of the more highly qualified will choose positions involving responsibility and direction in preference to bedside nursing the criticism is true. But is there any reason why they should not accept the higher, more far-reaching responsibility if they are duly qualified? Will they not ensure a better type of bedside care by their very ability to supervise and to direct others? The number of women who will choose or who are fit for the higher reaches will be necessarily small. It is not intended for one moment to recommend that all pupils be compelled or advised to take the combined course.

Further, there is a growing conviction that another nursing group than that which now exists will soon have to be formed. Many routine nursing and domestic duties now performed by the graduate nurse could be performed just as acceptably by women possessing less training provided they were properly trained and supervised. The Canadian National Association of Trained Nurses

has gone on record as endorsing the principle of training licensed attendants providing legislation can be devised which will protect the graduate nurse and prevent these women assuming a status which does not rightfully belong to them. In other words, nurses at large realize to the full the necessity for an auxiliary nursing force, and they are willing to recruit, to organize, to educate and to direct such a force provided they themselves are not wiped out of existence by the unfair competition such a group would involve unless its field of operation were definitely established by law. The creation of such a force only emphasizes the need for competent leadership. Left to itself it could easily become a menace to the public and to the medical profession. Suitably officered and directed it might be of great benefit to both.

It is undeniable that the medical profession has been greatly hampered for need of just such service as such a group could render. It is this circumstance which has given rise to recent opposition on the part of some medical men to any advanced standard in nursing education. That such opposition exists is unfortunately true. A few medical societies as well as individuals in the United States and Canada, have gone on record as opposing higher education for nurses. The most charitable interpretation which can be made of such action is that it was taken in ignorance of the true facts of the case. The very men who took it are condemned out of their own mouths for they themselves exact the highest technical efficiency from nurses in certain branches in which they themselves are specialists. The modern operating room nurse, the modern supervisor of obstetrical and eye, ear, nose and throat departments are required to possess unusual technical skill and theoretical knowledge. They are required to possess them by the very men who cry out for a return of the good old days when an old woman who would do what she was told was all that a man needed. What these men do not stop to consider is that they require and are justified in requiring, two separate and distinct types of service; the fully trained highly specialized type and the routine worker. The trouble is that they insist that the same worker shall adapt herself, and become at the will of the physician employing her, the one or the other, or both. With the best will in the world, it cannot be done. Those of us upon whom is laid the heavy task of preparing the women of either type for their life work know that it cannot. The same blind routine cannot and will not meet either need. Specialized methods of education must be formulated for both, suitable teachers must be provided for both. And so we re-



turn to the need of education for leadership, and there is no logical source for that but the University. Such a high authority as Mr. Justice Hodgins in his recent report on medical education in Ontario stated that so far whatever betterment had been brought about in nursing education had been due to the efforts of the nurses themselves. In a measure, this is true. But if we have had opposition from the medical profession and from the laity, we have also had most generous support. Men and women in both walks of life have believed in us and in our cause. This Province is an illustration of that fact. The establishment of a department of nursing in the University of British Columbia is largely due to the vision and energy of a physician, the executive head of the Vancouver General Hospital. The Chancellor of the University, also a physician, has stood its staunch friend, as has the Provincial Officer of Health for this Province. The relation in which these men stand to the community has demonstrated to them that something must be done to enlarge the mental horizon of women upon whom such heavy responsibility is being laid.

To those who are in opposition or are in doubt one last word: If there are any such here, will you not listen to the appeal of those upon whose shoulders you yourselves lay such heavy burdens? You see so many faults, so many blunders in our nursing service. So do we, they are not hidden from us. You cannot imagine why things should not run more smoothly—but we can—we know, it is because of insufficient teaching and supervision. You do not realize how complex your own profession has become. How can we expect you to realize how difficult it is for us, with few of your educational advantages, to keep up with the advance shown in medicine? And yet we have tried to keep up. Slowly but surely the routine processes of medicine are being delegated to us. By whom? By you. We are expected to give acceptable service as anaesthetists, as laboratory and X-ray technicians, as your field workers in preventive medicine. You have taken us for granted as men always take their women folk for granted. If we had not wished to develop ourselves you would have forced—you have forced—development upon us. Some years ago I stood and watched with a high heart the woman's suffrage parade in New York City. Near the end of the long procession, in which women from every walk of life participated, came a group of young girls with a banner inscribed, "All this comes of teaching girls to read." Remember, you taught us our letters in nursing. You should not have set our feet upon the road if you did not mean that we should climb the hill. You should not

have taught us our letters if you meant that we were not to read to the end of the chapter.

Associations such as this mean that we shall so read, and we shall convert the others. In the meantime what can you do to help. Well; hope all things and believe all things of us. Reserve judgment and be patient with our failures. Throw the weight of your great influence on our side. Don't let pass resolutions condemning the higher education of nurses unless you really must. This movement cannot be killed, but it can be retarded, it can be prejudiced in the eyes of the public by so doing. Give us a fighting chance, a fair field and no favour.

There is a long, uphill struggle ahead of us. The universities are sympathetic, but their sympathy is tempered with caution. At first they felt that opening their jealously guarded portals to nurses meant lowering the standards for the maintenance of which they exist. Once it was clear to them that we were willing to have our students meet the same requirements as the rest of the student body they became more friendly. But the fact must be faced that we constitute a serious educational problem. Suitably equipped personnel for the faculty of nursing is difficult to obtain. Few of us possess full academic standing—no precedents exist. Compromise is necessary. No one knows that better than the pioneers of this movement. But before long adequately prepared women, the output of the combined courses, will be available. Until then, we must carry on as best we can.

You are met here to consider ways and means whereby the community may be better served in health matters. The educational phase of this gigantic task is continually emphasized in your discussions. Surely we can enlist your sympathy in support of a movement which has as its object the development of a nursing force worthy of the cause to which it and you alike are dedicated—the prevention of disease and the conservation of life, lived to the full, active, healthy and happy.

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# Health Promotion and Disease Prevention

BY J. J. MIDDLETON, M.B., D.P.H., *Director of Publicity, Provincial Board of Health, Ontario*

PUBLIC HEALTH is becoming a matter of increasing interest and importance to every branch of the community. The Great War, with its tremendous loss of life, has demonstrated to the people of Canada, as well as other progressive nations, the pressing need for the preservation of the race. So many precious lives have been sacrificed on the battlefield during the past six years, that our duty as citizens is plain; we must try to repair some of the loss, by preventing the avoidable waste of human life that at present is going on all around us. We must reduce the appalling death-rate among infants and young children, and eliminate as far as possible the ravages of venereal disease, which affects thousands of persons in this province at the present time, and which, if left unchecked, would sap the vitality of the people, and fill our hospitals and asylums with the blind, the incurable, and the insane. There are many lives unnecessarily lost in industrial occupations. The picture is disquieting, but it is only when we realize the seriousness of the problem that public sympathy and support can be secured. Besides, there is every reason to be optimistic. Here in Ontario we are on the threshold of a period of reconstruction, with a health programme that will see in its accomplishment the raising of the general standard of health, the lowering of the infant mortality rate, and the building up of the coming generation into a stronger and more virile race.

To make a start in this programme, we need to know some facts about existing conditions.

*Maternal and Child Welfare.*—Take the matter of Child Welfare: there were approximately 60,000 babies born in Ontario in the year 1919, and the infant mortality for the same year was only one or two less than 6,000, just about ten per cent. This means that of every ten infants born, one of them died. Moreover, nearly eighteen per cent. of the total deaths of the province were infants under one year of age.

From official sources we also learn that of the males who survive to manhood, large numbers are physically defective, as shown

by recruiting figures during the war, one-third of all the men examined between the ages of eighteen and thirty-five years being physically unfit for military service. The striking feature of this picture is that a large percentage of the wastage and inefficiency could have been repaired in early life, had the child been brought under medical supervision. It is to prevent such a laxity towards child welfare in future—in fact, to provide care and advice to the expectant mother, and to supervise the care of the child, that the Maternal and Child Welfare Division of the Provincial Board of Health has been established. Through the medium of local clinics, skilled physicians and trained nurses will offer sympathetic advice and help to mothers, pointing out physical defects in infants and young children; mothers will also be persuaded to take their children to the family doctor as soon as any defects which may have escaped the notice of the mother are detected by the trained eye of the Public Health nurse. The nurse will not even suggest treatment—she will simply help the mother to take a scientific interest in the baby's welfare, and, even though the child seems in perfect health, to have her bring it regularly to the baby clinic for consultation with the doctor in charge.

*Nursing Demonstrations.*—The actual start of the Public Health nursing campaign took place recently, when eight graduate nurses, specially trained in Public Health work by the Provincial Board of Health, and eight additional graduate nurses, whose services have been placed at the disposal of the Board through the generosity of the Ontario Red Cross Society, have started demonstrations at various points throughout the Province. The object of these demonstrations is to impress the public with the need of appointing a permanent nurse in every community to carry on the good work which the provincial nurses have started. Each nurse is provided with a motor car, to enable her to cover as much ground as possible and get in touch with all classes of people. Next summer a huge motor car, fitted up as a Child Welfare Clinic, will tour the Province, and Child Welfare work will be demonstrated by the physician and nurse in charge. There will also be Public Health films shown, and addresses given on Public Health topics.

The launching of this demonstration in the interests of Maternal and Child Welfare is an event of great importance to any district so benefited. To see that every child gets a good start in life is nothing more than the plain duty of all good citizens. Up till very recently, governments have paid too little attention to this most important asset of any nation—the rising generation. Here



in Canada the Government has, from time to time, spent thousands upon thousands of dollars for the improvement of cattle, sheep, pigs, etc., but not one dollar has been spent as a nation to improve the health of the children. Thousands of dollars have been spent on immigration agencies in Europe for bringing settlers to this country, who in many instances have not proved to be very desirable citizens, but not one dollar on the best kind of settler this, or any other, country can produce—the native-born child. The Public Health nurse comes to fill a place in the community that hitherto has been overlooked or neglected. Her work is to detect errors in diet or in the infant's physical condition, that may have escaped the mother's notice, but which the nurse knows very well may lead to serious trouble if left without medical attention. The death-rate and the causes of deaths of infants less than one year old, in any one district, shows how much the "Well-baby" clinic is needed.

*Public Health Nurse a Necessity.*—The necessity for a Public Health nurse sometimes needs to be clearly demonstrated in communities where a school nurse, or nurse supplied by a voluntary organization, has already been installed.

The school nurse working under the Provincial Board of Education deals for the most part with children already attending school. She has neither the time nor the opportunity except in special cases to visit the home, and cannot attend to the pre-natal care of mothers, to defects in infant feeding or to the physical defects of infants and young children of pre-school age. Moreover, as sixty per cent. of the deaths from diphtheria in this Province occur among children of pre-school age, the importance of instructing mothers as to the danger of sore throat in a little child cannot be overestimated. Lest the cause may be diphtheria, a doctor should be called at once to make a diagnosis and, if necessary, administer antitoxin at the earliest possible moment. Delay is often attended with fatal results.

In a large city in this Province the Medical Officer of Health recently stated that thirty per cent. of the children arriving at school age were physically defective, due, among other causes, to faulty and insufficient feeding during the first two years of life. It will thus be seen that nursing supervision at this period of life cannot be attended to by a nurse whose whole time is occupied in the schools.

The nurses supplied by voluntary organizations devote their time largely to bedside nursing and the care of the sick, a very necessary work, but these duties prevent them from doing much in the field of public health education and preventive medicine.

## DUTIES OF NURSE

The duties of the Public Health nurse will include home visiting, which will be carried out in a systematic manner, and will enable her to stimulate local interest in child welfare, and also detect, if possible, any cases of communicable disease, such as tuberculousis, that are not under medical supervision. There is much need for educational work in this matter of disease prevention, according to the reports of some of the nurses already in the field. One case is reported of a man suffering from tuberculosis who said he had never been told the dangers to others of not covering his mouth with a handkerchief when coughing. The man also stated that he made it a point to put the baby down if he happened to get a bad fit of coughing while carrying it about. He did not appear to know how extremely dangerous it is for any tubercular person even to handle children, not to speak of the risk of infecting both children and adults living in the same house.

The Public Health nurse will point out such dangers and will also report any case of venereal disease and mental defectives that come under her notice. In her demonstrations the duties of the nurse will be, moreover, to work towards the ultimate establishment of a health centre, in which child welfare conferences, nutritional classes, consultations for tuberculosis and heart affections, and a dental service for adults and children may be provided for. Her special province is the health of expectant mothers, infants and children. After the babies have received attention at the clinic it will then be the Public Health nurse's duty to see that the instructions, etc., given at the clinic are followed out by the mothers. The nurse should also take charge of the clinic, and would be able to demonstrate to the mothers the proper methods of dressing the baby, the proper methods of preparing its food, etc. She should also aim to impress mothers with the fact that no food for infants is as good as that which nature intended for it. In addition, the nurse, by means of home visiting, becomes acquainted with conditions in the municipality, and gradually increases the sphere of her activities to include work along the various lines mentioned, until the health centre is a real factor for good in the life of the community. To try to establish a health centre without a Public Health nurse as central figure is like trying to present the play "Hamlet" with Hamlet himself left out.

This work will not in any way interfere with the physicians. In fact, it needs their earnest co-operation, for the cases will not



be treated at the clinic—those requiring attention being referred to the family doctor.

*Financial Assistance.*—In rural districts, if the local community centre is unable entirely to finance the project of a visiting nurse, it is hoped that the Provincial Board of Health may be able to give financial assistance in such cases as seem to require it. The Board has no fear of failure of such a plan. It is felt that the value of a Public Health nurse will be so rapidly demonstrated that the demand for visiting nurses will come from all over Ontario, and local municipalities will be glad to finance her appointment, realizing the great benefit her services will be to the entire community.

Through the medium of the press, echoes of the work being done for Child Welfare in this province have reached far beyond the bounds of Canada, a letter asking for further information about our programme here having been recently received from North Brabant, in Holland.

*Public Health Organization.*—Although public interest in preventive medicine has increased tremendously since hostilities ceased, it must not be forgotten that the Provincial Board of Health started the nucleus of its present activity some years before the war. However, the small sums appropriated by the Government until the present year have been one of the great handicaps that have had to be contended with. Public Health, somehow, was regarded as a matter of secondary importance when money grants were under consideration. That the present Government has made liberal grants for public health purposes is very encouraging, as in these days it is only by having available funds that new lines of activity can be actually undertaken.

Dr. J. W. S. McCullough, Chief Medical Officer of Health for the province, has formulated a programme for extending public health activities in every possible direction. To concentrate along particular lines and prevent overlapping, the greater part of the work of the Provincial Board of Health has been divided into divisions, each in charge of a director, who is responsible to the Chief Medical Officer. The Board has also the services of three consultants—Prof. J. G. Fitzgerald, University of Toronto, Dr. Alan Brown, Toronto, and Prof. B. P. Watson.

There is the Division of Venereal Diseases, with Dr. R. R. McClenahan as Director, Dr. B. L. Guyatt and Dr. J. W. Hunt as clinical specialists, and Miss E. L. Moore as Social Service nurse; there is the Division of Maternal and Child Welfare, with Miss M. Power, B.A., as Director, Miss B. Knox as Associate, Miss K. Os-

borne as special nurse for the Child Welfare Clinics, and Dr. W. J. Bell as Pediatrician; there is a Division of Industrial Hygiene, under the Directorship of Dr. J. G. Cunningham, a Division of Publicity, under the Directorship of Dr. J. J. Middleton, and a Division of Sanitary Engineering, under the Directorship of Mr. F. A. Dallyn, C.E., and with Mr. A. V. DeLaporte, B.A.Sc., as Chemist in Charge of Experimental Station. The Laboratory Service is under the Directorship of H. M. Lancaster, B.A.Sc. R. W. Bell, M.D., is Provincial Medical Inspector.

The various divisions, while working along parallel lines, keep in touch with one another, and mutually co-operate, as the success of one division means success to the others—their interests and aims being in common.

*Venereal Disease.*—In the plans for dealing with venereal diseases, clinics are being established in the larger cities, and medical officers of health are co-operating with the Provincial Board in trying to locate all cases of venereal disease, and bring them under treatment. The preparation, phenarsenamine, is now supplied free to clinics, hospitals and Boards of Health, for the treatment of all those patients who cannot afford to pay. Valuable educational work is being carried on by the Venereal Disease Division of the Board, and also by the National Council for Combating Venereal Disease, whose offices are at 154 Bay Street, Toronto.

*Tuberculosis.*—Intensive work is being done by the Provincial Board of Health in combating tuberculosis, the campaign receiving much assistance from voluntary societies and from the efforts of the Canadian Society for the Prevention of Tuberculosis, largely through the educational programme carried on by its indefatigable Secretary, Dr. George D. Porter. The Government now provides an amount up to \$4,000 towards the cost of building a sanatorium, and denotes the sum of \$3.50 weekly towards the cost of each patient. The accommodation for patients in sanatoria in Ontario is now, including several preventoria, for pre-tuberculous children, about 2,000, as compared with 615 ten years ago. The campaign against tuberculosis includes treating those affected, educating those exposed as to how to take care of themselves, and teaching those not exposed how to live so as to increase their resistance and to keep well. As a result of this programme of education, the deaths from tuberculosis have been reduced from 102 per hundred thousand in 1910 to 78 per hundred thousand in 1919. In view of our present knowledge of tuberculosis and its treatment this is a remarkable result.



*Laboratories.*—The establishment of laboratories was commenced some years ago by the Board, in order to afford opportunity for ready and adequate free diagnosis for the medical profession in the communicable diseases, and to provide for analysis of water, milk and other foods. The main laboratory at Toronto carries on the preparation of certain vaccines, such as whooping-cough, typhoid and paratyphoid, as well as the new arsenical product, called phenarsenamine, for the treatment of syphilis; also the free distribution of Public Health Biological Products, viz., smallpox, vaccine, diphtheria antitoxin, tetanus antitoxin, anti-meningitis serum, Pasteur preventive treatment of rabies, material for Schick test, anti-typhoid vaccine, influenza vaccine, pertussis vaccine, and a combined vaccine for the prevention of the complications of influenza.

*Industrial Hygiene.*—The conservation of man-power to its full extent makes the supervision of the health of the worker of vital consequence. With this in view a beginning has been made by the establishment of a Division of Industrial Hygiene, which, it is hoped, will assist in solving the problems regarding the health of employees, the consequence of longer or shorter hours of labour, and the physical adaptability of people for certain trades that are considered dangerous, unhealthy or sedentary.

*Women in Industry.*—The increasing numbers of women in industrial pursuits has an important bearing on the health and vitality of the coming generation, and will be given much attention. A recent investigation among industrial plants in Toronto revealed the fact that one-third of all the employees are women, and, these being largely of child-bearing age, the health problems thus raised are numerous and intricate.

*Sanitary Engineering.*—A pure water supply is one of the essentials in maintaining a high standard of public health, and the results of a firm and progressive policy by the Division of Sanitary Engineering, in improving water supplies and sewerage facilities, can be observed in the low death rate from typhoid in this province. In the cities of Ontario the death rate is 4.3 per 100,000, and in rural districts 4.5 per 100,000, figures far below the records of any of the other provinces, or of the United States.

*Vital Statistics.*—Valuable assistance in compiling statistics of births, deaths, and causes of death, as well as detailed records of epidemics, etc., throughout the Province, is afforded the Provincial Board of Health through the Registrar-General's branch, under the directorship of Mr. S. J. Manchester. This department will be fur-

ther strengthened in the near future by the appointment of a Provincial Epidemiologist, who will ascertain the causes and location of outbreaks of communicable disease, and advise preventive measures for stamping out or controlling any such outbreaks.

*Public Health Literature.*—Literature and other information may be obtained on application to Dr. J. W. S. McCullough, Chief Officer of Health, Parliament Buildings, Toronto.

The literature, which is sent free to anyone interested, includes valuable information on cancer, tuberculosis, and all varieties of communicable diseases, and their modes of infection: "The Baby" book, and information to mothers and all those interested in Child Welfare; pamphlets on Venereal Diseases—General Facts for Young Men, Facts for Girls and Young Women, Short Description of Venereal Diseases, Instructions to those having Venereal Diseases; pamphlets about water purification and sewage disposal; copies of Public Health Acts dealing with the general work of the Provincial Board, Venereal Diseases, Vaccination, etc.

Valuable assistance is being given the Provincial Board of Health by various powerful voluntary organizations who co-operate with the Board and work under its supervision, so that their activities may be directed along the lines where they can be of the best advantage.

By these combined efforts, the public interest in health matters is being rapidly stimulated, and a general improvement in the public health and well-being of both children and adults cannot fail to be brought about.

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## PUBLIC HEALTH ORGANIZATION.

PROVINCE OF ONTARIO.

Minister of Labor and Health.

Chief Officer  
of  
Health.

Provincial Board of  
Health.  
(7 members.)

Consultants in:—  
(1) Public Health  
Administration.  
(2) Child Welfare.  
(3) Obstetrics.

## DIVISIONS.

- (1) Public Health Administration.
  - (2) Laboratories.
  - (3) Sanitary Engineering.
  - (4) Maternal and Child Welfare, and  
Public Health Nursing.
  - (5) Public Health Education.
  - (6) Venereal Diseases.
  - (7) Industrial Hygiene.
  - (8) Vital Statistics.  
(Registrar-General's Branch.)
- 8 District Officers of Health.
- 9 Public Health Nurses.
- 8 Temporary Nurses supplied by the  
Ontario Red Cross Society.

|                                       |              |
|---------------------------------------|--------------|
| Appropriation, 1920 .....             | \$527,626.80 |
| Estimated Population of Ontario ..... | 2,900,000    |

## National Health Council

A CONFERENCE of a number of the leading national voluntary health agencies was held in Washington on Dec. 10, 1920, at which meeting a National Health Council was created, a form of organization approved, and a constitution and by-laws adopted. The membership of the Council is at present composed of nine organizations, the officers recently elected being as follows: Chairman, Dr. Livingston Farrand; Vice-Chairman, Dr. Lee K. Frankel; Recording Secretary, Dr. C. St. Clair Drake. The election of a treasurer was deferred until further consideration could be given to the whole question of financing the project.

The Council was the outgrowth of many efforts in past years to co-ordinate national voluntary health organizations, initiated by the American Public Health Association, the American Medical Association, and other agencies. These measures culminated in a special health co-ordination study carried out during the summer of 1920, under the direction of Dr. Charles J. Hatfield, Dr. Watson Rankin, and Dr. Livingston Farrand—with the financial aid of the American Red Cross. This investigation was conducted by Dr. D. B. Armstrong.

At a preliminary conference in Washington, at the call of Dr. Farrand, on October 18, 1920, the need for such a co-ordinating body was fully discussed, and a temporary organization perfected, Dr. Farrand acting as temporary chairman, and Dr. Armstrong as temporary secretary.

The organization conference on December 10th, referred to above, approved of the following list of activities, as indicating the legitimate field in which the Council might function:

1. A special information bureau.
2. A legislative bureau.
3. The co-ordination of health activities.
4. Periodic joint conferences.
5. A statistical bureau.
6. The development of educational health material.

It is anticipated that financial resources, from the Red Cross and from other participants, will be sufficient to enable the Council to establish an office and staff, and to undertake first those activities promising the greatest benefit to member organizations.



In accordance with the by-laws adopted by the Council, each member organization has appointed one representative and one alternate. The original members, with corresponding representatives and alternates, are as follows:

American Public Health Association, Dr. Lee K. Frankel, Dr. M. P. Ravenel.

American Red Cross, Dr. Livingston Farrand, Dr. E. A. Peterson.

American Social Hygiene Association, Dr. William F. Snow, Mr. Bascom Johnson.

Council of State and Provincial Health Authorities, Dr. C. St. Clair Drake, Dr. E. R. Kelley.

Council on Health and Public Instruction of the American Medical Association, Dr. Watson Rankin, Dr. Frederick R. Green.

National Child Health Council, Dr. Philip Van Ingen, Mr. Courtenay Dinwiddie.

National Committee for Mental Hygiene, Dr. Thos. W. Salmon, Dr. Geo. H. Kirby.

National Organization for Public Health Nursing, Miss Edna L. Foley, Miss Mary S. Gardner.

National Tuberculosis Association, Dr. Chas. J. Hatfield, Dr. J. Alexander Miller.

The by-laws provided that "other national health organizations may hereafter be elected to membership by two-thirds vote of the members." Provision is also made for advisory or conferring, as well as directly participating members. The International Health Board probably will, together with official agencies such as the U. S. Public Health Service, be associated with the Council in this capacity.

Many important matters before the Council, given partial consideration at the last conference, such as office, staff, budget, resources, etc., were referred to a sub-committee made up as follows: Dr. William F. Snow, Chairman; Dr. C. St. Clair Drake, Dr. Charles J. Hatfield, Dr. Lee K. Frankel, with the Council Chairman, Dr. Livingston Farrand. It is expected that this committee will report its deliberations to the Council at a meeting early in January, following which the organization should be in a position to proceed with the development of its programme.

The Public Health Council, representing as it does many prominent national health agencies, should serve as a valuable clearing-house and co-ordinating centre, in many fields where common functions are performed. It aims to be an integrating force among

independent, autonomous agencies, rather than a merger of such agencies into one organization. It should increase the economy and effectiveness of operation, should eliminate duplication of effort, and should enhance opportunities for sympathetic and constructive public service. Such a movement, through its membership, and through a mutually helpful relationship with State and local voluntary health agencies, should effectively serve the declared object of the National Health Council, which is, "the betterment of health work in the United States."

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# The London Child Welfare Association

During the past six months, the London Child Welfare Association has increased its visiting list to a total of 388 families, with from one to three children in each family under supervision.

A weekly clinic for sick children is held at Victoria Hospital, and three Child Welfare or Nutritional clinics held weekly in public schools. Already more clinics are needed to accommodate the ever increasing attendance.

The 1919 infant mortality statistics showed the appallingly high infant death rate of 116 per 1,000—66% of the total deaths resulting from prenatal causes. To combat this, a prenatal clinic has been started which in time will undoubtedly reduce the number of these unnecessary deaths.

An arrangement has been made with the Institute of Public Health whereby the nurses doing this work attend some of the lectures in the Public Health Nursing Course of Western University, particularly those relating to Child Welfare work, and in return, the students nurses are given practical field work in the clinics and in the home visiting.

At the Baby Week held in May, 457 babies were examined, all of whom have since been visited in their homes, and many of whom are now attending clinic regularly.

During the Western Fair, this Association maintained a tent with fifteen cots, where mothers could leave their babies to be cared for. An opportunity was thus given the nurses of giving more than 200 mothers some excellent advice as to feeding, clothing, etc.

An important step has been taken toward the centralization of public health activities in London, in the offer made by the Public Health Institute to supply permanent headquarters for the London Child Welfare Association.

# Aims of Labour

HON. W. R. ROLLO, *Minister of Labour for Ontario.*

Read at the Annual Meeting of the Canadian Conference on Public Welfare,  
Hamilton, Ont., May 10th and 11th.

I HAVE been invited to read to you to-night a paper on the Aims of Labour; and, although I accepted the invitation, I felt that no one person, or, for that matter, no group of persons could present these aims with any degree of certainty, as at the present time there are apparently no two persons who can agree upon what Labour's aims really are. The aims of each and every labour organization and individual are widely divergent, yet each claims to have the one and only solution for all the trials and troubles of Labour.

We have first of all the Socialists who contend that their doctrine which, amongst other things, proclaims that socialized ownership and operation of all the means of production, distribution and exchange, is the aim of Labour and the cure-all for all its troubles. Then we have the Communists with their doctrine of the forcible overthrow of all existing social conditions as the only solution for obtaining an ideal working world. These are but two of innumerable organizations and parties who claim that theirs are the aims of Labour; and so, with all this diversity of opinion, it is a question in my mind whether any organization or individual can justly claim that it alone represents Labour's aims.

The one outstanding Labour organization in America to-day is the American Federation of Labour. This is an International Trade Union organization in so far as the United States and Canada are concerned. It has a membership of nearly four million, of which three hundred thousand are in Canada. The organization is made up of 111 International Trade Unions with their 33,852 Local Unions, 46 State Federations, 816 Trades and Labour Councils, and 884 local Trades and Federal Unions having no Internationals. It has two thousand volunteer and special organizers whose duties are to organize new unions wherever and whenever the opportunity presents itself.

Some of the ideals of the Federation are:

1. Free schools, free text books, and compulsory education.



2. A workday of not more than eight hours in the twenty-four-hour day.

3. A strict recognition of not over eight hours per day on all Federal, State, or Municipal work, and at not less than the prevailing per diem wage rate of the class of employment in the vicinity where the work is performed.

4. Release from employment one day in seven.

5. The abolition of the sweat-shop system.

6. Sanitary inspection of factory, workshop, mine and home.

7. Liability of employers for injury to body or loss of life.

8. The passage of Anti-Child Labour Laws in states where they do not exist and rigid defence of them where they have been enacted into law.

9. Woman Suffrage co-equal with Man Suffrage.

10. Suitable and plentiful play grounds for children in all cities.

11. Continued agitation for the public bath system in all cities.

12. Qualifications in permits to build, of all cities and towns that there shall be bathrooms and bathroom attachments in all houses or compartments used for habitation.

The above is a partial statement of the demands which organized labour, in the interests of the workers—aye, of all the people of our country—makes upon modern society. Higher wages, shorter workday, better labour conditions, better homes, better and safer workshops, factories, mills and mines. In a word, a better, higher and nobler life. More than four million wage earners, who have reaped the advantages of organization and federation, appeal to their brothers and sisters of toil to unite with them and participate in the glorious movement with its attendant benefits.

#### LABOUR AS "REFEREE" IN U. S. A.

The American Federation of Labour has declared against the formation of an independent political Labour party in the United States, but has adopted a policy of supporting Labour's friends and defeating its enemies irrespective of the political allegiance of the candidate. This is done by supporting every candidate running for office who pledges himself to uphold the legislative programme adopted by the Federation, and by refusing to endorse or work for those who are antagonistic or refuse to support that programme. This method is worthy of merit and is especially applicable to the United States, as the system under which their elections are held results in the return of a large number of candidates pledged to

the organization's legislative programme and, consequently, much legislation initiated by the American Federation of Labour finds its way on to the Statute Books of the United States.

In adopting this method of political action the Federation has earned for itself the disapproval and antagonism of the radical wing of the Labour movement in the United States and Canada. It has been this stand more than any other thing which has been responsible for the formation of the I. W. W. in the United States and the O. B. U. in Canada, who take issue with the International organization for not declaring for independent political action and using its powerful economic strength on the political field. The American Federation has refused absolutely, however, to be dragged into politics as a separate party, believing that as politics play such an important part in the life of the people of the United States that to enter the political field as a separate and distinct political party would cause so much dissension within its ranks that the greatest trade union movement of all times would ultimately be wrecked. While this opinion is not held by all the moderate thinking men in the American Federation of Labour, it is the opinion of the veteran leader, Samuel Gompers, who has little difficulty in convincing the large majority of the membership that his view is correct.

#### CANADIAN LABOUR.

In Canada the one outstanding labour organization is the Trades and Labour Congress of Canada, which has an affiliation of upwards of three hundred thousand members. Mr. Tom Moore is the president of this Congress, which is a legislative organization formed for the purpose of endeavouring to place on the Statute Books of Canada legislation in the interests of the wage-earners. These are a few of its objectives:

1. Free compulsory education.
2. Legal working day of six hours, and six days to a week.
3. Government inspection of all industries.
4. The abolition of the contract system on all public works.
5. A minimum living wage, based on local conditions.
6. Public ownership of all franchises—such as railways, telegraphs, telephones, water-works, lighting, etc.
7. Exclusion of all Asiatics.
8. Abolition of child labour for children under sixteen years, and the establishment of equal pay for equal work for men and women.



9. Voluntary arbitration of labour disputes.
10. Prohibition of prison labour in competition with free labour.
11. Equal suffrage for men and women over 21 years of age.

The Trades and Labour Congress has also refused to take direct political action, although it has encouraged the formation of an Independent Labour Party outside of the Trade Union movement and is directly responsible for the formation of the Independent Labour Party of Ontario, which has at the present time about sixty-five branch organizations and is represented in the Ontario Legislature by twelve members who, along with forty-five representatives of the United Farmers of Ontario, compose the present Ontario Government.

The Independent Labour Party of Ontario stands for:

1. Equal pay for equal work.
2. That adequate equal pensions be granted to all disabled soldiers, either officers or men, or their widows and dependants.
3. Pensions for mothers with dependent children.
4. Old age pensions.
5. Creation of national reserves of coal and timber.
6. Government control of cold storages.
7. National, Health and Unemployment insurance.
8. Maternity benefits and free hospital service.
9. Equality of opportunity for men and women—politically, socially and industrially.
10. The eight-hour workday.
11. Free compulsory education, including text-books. Free education in all institutions controlled by the Government; every child to be guaranteed, from its birth until it becomes a self-supporting member of society, the material necessities of life, medical supervision and an unlimited education.

We (The Independent Labour Party of Ontario) believe that performance is better than promises, and we rest our claim for the support of the workers on the general declaration that we stand for the industrial freedom of those who toil and the political liberation of those who for so long have been denied justice.

From these various platforms, which have been presented to you, you will see that the aims of Labour are the aims of powerful and influential industrial and political organizations of men and women, which have been formulated after much experience and careful consideration, rather than the passing opinions of individuals. They are, in the main, for the benefit of humanity as a whole

rather than for the benefit of material things, and can be attained only through united action in the industrial or political field on the part of those who uphold them.

### THE IDEALS OF LABOUR.

Some of Labour's ideals are very definite, others are very indefinite; they are continually changing, for what was good yesterday will not be good to-morrow; although it is true that some things which Labour stood out for centuries ago still hold good to-day. Certain of these ideals can only be accomplished on the industrial field, but there are others which can only be achieved in the Parliaments of this country. These latter are the ones that will result in the greatest good to the greatest number, but they will never be brought about until Labour has larger representations in those Parliaments. It is up to Labour and all its friends, therefore, if they would bring about the humanitarian reforms which they are advocating, to get behind them and support them to the last ditch. They must exert all their energies if they would see a minimum wage for women, to allow them to live in comfort and decency, established; if they would have allowances for widowed mothers with dependent children in order that the children might have equal opportunities with every other child; or Old Age Pensions in order to keep out of charitable institutions those who have given the best years of their lives for the benefit of their country; if adequate compensation is to be provided for the men, or their dependents, who have lost their lives, their limbs or their eyes in industry, that the prosperity of this country might continue; that adequate pensions to the dependents of those who have made the supreme sacrifice or who have suffered in any way as a result of the great war may be the order of the day; that there may be better laws for the protection of women and children, and that the enforcement thereof may be more adequate; that equal opportunities may be given all children of all people; or that any other of the numerous reforms that are in the interests of the people may be accomplished.

It is useless for us to continue to hold conventions and conferences to discuss these questions which are so vital to humanity, or to consider ways and means of bringing them about, unless we are prepared to work and vote for men and women who are in sympathy with them; unless we are prepared to send them to the Legislatures and Parliaments of this country, that they may enact legis-



lation along these lines. I believe that those are the places where the most effective work can be done, in fact they are the only places where most of it can be done at all.

I thank you, Mr. Chairman, ladies and gentlemen, for giving me the opportunity of placing these matters before you this evening, and I assure you that as long as I am a member of the Ontario Legislature I will, by my vote and voice, support any legislation that has for its object the promotion of the public welfare in this Province.

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## FRACASTOR'S POEM ON SYPHILIS

Of special interest among the collection of rare books and manuscripts at the Surgeon General's Library at Washington, is the well-known poem by Fracastor in which syphilis is described and in which, indeed, the disease is first mentioned under its present name. The original poem is in Latin, but there is also an excellent English translation by Tate, who was Poet Laureate in 1689. Following are some striking extracts from the Tate translation:

Through what adventures this unknown Disease  
 So lately did astonished Europe seize,  
 Through Asian Coasts and Libyan Cities ran,  
 And from what seeds the Malady began,  
 Our Song shall tell: To Naples first it came  
 From France, and justly took from France its Name.

\* \* \* \* \*

Yet where the Western Ocean finds its bound  
 (The World so lately by the Spaniards found)  
 Beneath this Pest the wretched Natives groan  
 In every Nation there and always known.  
 Such dire effects depend upon a Clime  
 On varying Skies and long Revolving time:  
 The temper of their Air this Plague brought forth,  
 The Soil itself disposed for such a Birth.

\* \* \* \* \*

The all-seeing Sun no longer could sustain  
 These practices, but with enraged Disdain  
 Darts forth such pestilent malignant Beams,  
 As shed Infection on Air, Earth and Streams;  
 From whence this Malady its birth received,  
 And first the offending *Syphilis* was grieved,  
 Who raised forbidden Altars on the Hill,  
 And Victims' blood with impious Hands did spill;  
 He first wore Buboës dreadful to the sight,  
 First felt strange pains and sleepless passed the Night;  
 From him the Malady received its name.





## The Provincial Board of Health of Ontario

### CASES AND DEATHS OF COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE YEAR 1920.

#### COMPARATIVE STATEMENT.

| <i>Diseases</i>                 | 1920         |               | 1919         |               |
|---------------------------------|--------------|---------------|--------------|---------------|
|                                 | <i>Cases</i> | <i>Deaths</i> | <i>Cases</i> | <i>Deaths</i> |
| Small-pox .....                 | 5,169        | 33            | 3,046        | 9             |
| Scarlet Fever .....             | 5,130        | 150           | 3,749        | 80            |
| Diphtheria .....                | 5,940        | 654           | 4,261        | 444           |
| Measles .....                   | 15,423       | 210           | 1,988        | 21            |
| Whooping Cough .....            | 2,042        | 210           | 1,163        | 78            |
| Typhoid .....                   | 713          | 182           | 429          | 145           |
| Tuberculosis .....              | 2,259        | *1,662        | 2,234        | 1,722         |
| Infantile Paralysis .....       | 37           | 14            | 49           | 8             |
| Cerebro-Spinal Meningitis ..... | 77           | 67            | 131          | 99            |
| Influenza & Pneumonia.....      | 24,284       | 2,416         | .....        | .....         |
| Primary Pneumonia .....         | .....        | 3,482         | .....        | 4,735         |
|                                 | <hr/>        | <hr/>         | <hr/>        | <hr/>         |
|                                 | 61,074       | 9,080         | 17,113       | 7,341         |

\*Only about 85% of deaths from tuberculosis are reported weekly by Local Boards of Health.

#### VENEREAL DISEASES—COMPARATIVE STATEMENT.

|                  | 1920         | 1919         |
|------------------|--------------|--------------|
|                  | <i>Cases</i> | <i>Cases</i> |
| Syphilis .....   | 1,740        | 1,213        |
| Gonorrhoea ..... | 2,158        | 1,757        |
| Chancroid .....  | 82           | 59           |
|                  | <hr/>        | <hr/>        |
|                  | 3,980        | 3,029        |

## COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE, NOVEMBER, 1920.

## COMPARATIVE TABLE.

| <i>Diseases</i>            | Nov., 1920   |               | Nov., 1919   |               |
|----------------------------|--------------|---------------|--------------|---------------|
|                            | <i>Cases</i> | <i>Deaths</i> | <i>Cases</i> | <i>Deaths</i> |
| Small-pox .....            | 437          | 0             | 1,128        | 0             |
| Scarlet Fever .....        | 413          | 11            | 428          | 7             |
| Diphtheria .....           | 666          | 43            | 621          | 50            |
| Measles .....              | 303          | 1             | 412          | 2             |
| Whooping Cough .....       | 177          | 14            | 127          | 7             |
| Typhoid .....              | 113          | 21            | 53           | 24            |
| Tuberculosis .....         | 145          | 99            | 157          | 124           |
| Infantile Paralysis .....  | 6            | 4             | 2            | 0             |
| Cerebro-Spinal Meningitis  | 4            | 4             | 11           | 8             |
| Influenza .....            | 18           | 12            | .....        | .....         |
| Influenzal Pneumonia ..... | .....        | 19            | .....        | .....         |
| Primary Pneumonia .....    | .....        | 116           | .....        | 174           |
|                            | <hr/> 2,282  | <hr/> 344     | <hr/> 2,949  | <hr/> 396     |

## VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH, NOVEMBER.

|                  | Nov. '20 (4 wks.) | Nov. '19     |
|------------------|-------------------|--------------|
|                  | <i>Cases</i>      | <i>Cases</i> |
| Syphilis .....   | 219               | 100          |
| Gonorrhoea ..... | 259               | 171          |
| Chancroid .....  | 16                | 4            |
|                  | <hr/> 494         | <hr/> 275    |

## DIPHTHERIA BY CITIES FOR NOVEMBER, 1920.

|                  | <i>Cases (4 weeks)</i> | <i>Deaths</i> |
|------------------|------------------------|---------------|
| Toronto .....    | 250                    | 11            |
| Hamilton .....   | 54                     | 4             |
| Ottawa .....     | 84                     | 5             |
| St. Thomas ..... | 27                     | 0             |
| Kingston .....   | 23                     | 0             |
| London .....     | 16                     | 0             |



## MUNICIPALITIES REPORTING SMALL-POX FOR NOVEMBER, 1920.

| County.                                 | Municipality.        | Cases. |
|---|----------------------|--------|
| Brant .....                             | Brantford .....      | 72     |
|   | Oakland .....        | 3      |
| Bruce .....                             | Teeswater .....      | 1      |
|   | Kincardine .....     | 1      |
| Carleton .....                          | Ottawa .....         | 156    |
|   | North Gower .....    | 3      |
| Frontenac .....                         | Kingston .....       | 18     |
|   | Kingston Tp. ....    | 3      |
| Grey .....                              | Sullivan .....       | 5      |
| Hastings .....                          | Belleville .....     | 24     |
|   | Rawdon .....         | 4      |
|   | Deseronto .....      | 2      |
| Huron .....                             | Morris .....         | 1      |
| Kent .....                              | Raleigh .....        | 1      |
| Lambton .....                           | Moore .....          | 1      |
| Middlesex .....                         | W. Nissourie .....   | 16     |
| Muskoka .....                           | Bracebridge .....    | 10     |
|   | Monck .....          | 5      |
| Norfolk .....                           | Middleton .....      | 1      |
| Nipissing .....                         | Sturgeon Falls ..... | 21     |
|   | North Bay .....      | 3      |
|   | Mattawa .....        | 4      |
|   | Field .....          | 1      |
|   | Springer .....       | 5      |
|   | Caldwell .....       | 7      |
| Parry Sound .....                       | South River .....    | 1      |
| Prince Edward .....                     | Hollowell .....      | 5      |
|   | Wellington .....     | 6      |
| Renfrew .....                           | Renfrew .....        | 1      |
| Simcoe .....                            | Orillia .....        | 2      |
|   | Midland .....        | 2      |
| Stormont, Dundas<br>and Glengarry ..... | Williamsburg .....   | 5      |
| Sudbury .....                           | Neelon .....         | 1      |
| Thunder Bay .....                       | Schreiber .....      | 6      |
| Temiskaming .....                       | Tisdale .....        | 1      |
| Waterloo .....                          | Waterloo Town .....  | 5      |
|   | Galt .....           | 3      |

|            |           |           |
|------------|-----------|-----------|
| Wellington | Peel      | 3         |
|            | Minto     | 1         |
| Wentworth  | Hamilton  | 10        |
|            | Waterdown | 1         |
| York       | Toronto   | 14        |
|            | Georgina  | 3         |
|            |           | <hr/> 438 |

#### SMALL-POX.

This disease is again on the increase in some localities in the Province. The 437 cases reported for November is the highest number of any month since March when 446 cases were reported. The cities of Ottawa and Brantford contributed by far the greatest number. The former 156 and the latter 72.

#### SCARLET FEVER.

The reports of this disease show a decrease in cases but an increase of four in deaths compared with the corresponding month of last year.

#### DIPHTHERIA.

The prevalence of this disease continues in some municipalities, while the cases exceed those of November last year by 45, the deaths are seven less which makes the very low death rate of 6.4 in 100.

#### TYPHOID.

The cases of this disease are much greater than a year ago, but the deaths are three less as may be seen in the Comparative Table.

The reporting of cases of Venereal Diseases is steadily improving. It is quite evident that physicians are co-operating with the local Medical Officers of Health much better than a year ago. One rather significant fact is the comparatively large number of cases of chancroid being reported. All such cases should be carefully watched for signs of syphilis appearing later on. It would be a good rule if all such cases reported back to the physician in two months for a Wassermann to definitely rule out all possible chance of the case being one of syphilitic infection.



# Interim Report of the Special Committee of the Council of the Academy of Medicine, Toronto, on the Glover Serum.

Your committee begs leave to present an interim report as follows:

At its first meeting, October 11th, 1920, the members of the Committee were unanimously of opinion that it would be impossible to estimate the value of the treatment on the basis of the examination of 15 cases selected by Dr. Glover from among the large number to whom the serum had been administered. Such a superficial and incomplete investigation would be of no scientific value, and therefore unsatisfactory alike to the Medical profession, to Dr. Glover and to the public at large. It was therefore recommended that the scope of the committee be enlarged so as to include the examination of all available data, experimental and clinical, upon which Dr. Glover had based claims, which if substantiated, would mark an advancement in our knowledge of the causation and treatment of cancer of the greatest importance. Your committee accordingly communicated its views to Dr. Glover, who previously had promised the Academy to present to the Fellows at an early date the results both of his experimental and clinical work.

The Council of the Academy approved of the wider scope of the investigation advised by the Committee, and also of the collaboration of a number of eminent authorities in other centres, in the consideration of the data obtained by the Committee and in the preparation of the report to be based thereon.

In view of the interest manifested both by the medical profession and the public, and the hope which had been aroused that an important contribution had been made to our knowledge of the causation and treatment of cancer, your Committee was impressed with the necessity for proceeding with care and thoroughness to collect all available facts, to examine them critically but with open minds, in order to appraise as accurately as possible the value of Dr. Glover's work.

The claims which have been made by Dr. Glover may be considered under two headings—(A) Experimental.

(B) Clinical.

## (A) *Experimental Claims:*

- (a) That Dr. Glover has cultured cancerous cells and from them has isolated and cultured an intracellular organism which he has found confined to and present in every type of cancer.
- (b) That by inoculation of these cells and organisms, cancer has been produced in a number of animals, including pigeons, rats, mice, rabbits, guinea pigs, hens, etc., and that a number of medical men including the Deputy Minister of Health of Canada, Dr. J. A. Amyot, had examined this material.
- (c) That by the injection of cultures of these cells and organisms "into the jugular vein of a horse of the roan type between the ages of seven

and nine years" a serum has been obtained which when injected into experimental animals, renders them immune to inoculation by the cancer cells and organisms before mentioned. In other words, while the animals not treated by the serum develop experimental cancer, those previously treated by it are immune.

- (d) That the serum injected in cases of human cancer has been found capable of producing improvement or cure.

Your committee, therefore, regrets to report:

- (1) That Dr. Glover refused to permit a visit to his laboratories by representatives of the committee.
- (2) That he refused the request of the committee to be allowed to examine his cultures and experimental material at present available.
- (3) That he has not acceded to the request of the committee to demonstrate his ability to culture cancer cells and organisms.
- (4) That he has not acceded to the request of the committee to demonstrate his ability to produce cancer by inoculation, or to immunize animals against it.

Your committee therefore has no evidence to substantiate Dr. Glover's claims on the experimental aspect of the question under investigation.

(B) *Clinical Claims:*

Your committee has endeavoured to collect information which would enable it to decide:

- (a) Whether Dr. Glover has succeeded in producing cures in cases definitely established as cancer (1) regularly, (2) occasionally.
- (b) Whether his serum produces improvement in cases definitely established as cancer, beyond that which occasionally occurs spontaneously or under palliative measures.

In order to answer these questions, your committee:

- (1) Has examined 12 of the 15 cases selected by Dr. Glover and asked for an opportunity for re-examination of them in order to follow their course.
- (2) Has sought to obtain from the medical attendants of patients, confirmation of diagnosis and a statement as to the clinical condition of the patient before applying to Dr. Glover for treatment.
- (3) Has obtained from St. Michael's Hospital through Drs. J. D. Loudon and J. M. McCormack a list of cases treated in that institution. Only those cases were included in this list which had received at least five injections of serum.
- (4) Has sought to obtain from Dr. Glover a complete list of the cases treated by him privately with notes of their progress and ultimate results obtained.
- (5) Has sought to obtain from the Fellows of the Academy, from hospitals and from practitioners at large, reports of the results of the serum treatment in cases which had come under their observation.

From the data above mentioned, as far as obtained, the Committee has found no evidence to warrant the hope that a specific cure for cancer has been discovered by Dr. Glover, or that a cure has been produced by the serum in any case definitely established as cancer.



It has evidence on the other hand that many cases of cancer, both early and advanced, have progressed steadily downwards, the course apparently uninfluenced by the use of the serum.

In answering the question whether the serum produces improvement in cases definitely established as cancer, beyond that which occasionally occurs spontaneously or under palliative measures, the Committee is confronted with a number of difficulties attendant upon the estimation of the value of any new form of treatment.

These may be summarized as follows:

- (a) Good results at times are obtained in cases supposed to be cancer, but in which the nature of the condition has not been established on incontrovertible evidence. In such cases, the usual conclusion of the medical attendant is *a priori* that his diagnosis was wrong, rather than that a cure of cancer had been effected.
- (b) Sufficient time must elapse to judge of ultimate results. Temporary improvement frequently occurs after the removal of mechanical obstruction by operation or by sloughing of a cancerous growth.
- (c) Retrogression or even spontaneous disappearance may occur in cases of cancer so that it is not uncommon to get considerable temporary symptomatic improvement apart from any treatment.
- (d) Psychic influences are of great importance: this aspect of the case has been well emphasized by Weil, a well known authority, as follows:

"Is it indeed, very remarkable that a patient who has been consigned to death as a victim of a hopeless malady, should regain his spirits and his appetite, when he is again confronted with the hope of a cure, and of the eradication of his disease? It is a phenomenon well-known to every student of the disease that a large proportion of cases responds in just this manner to any treatment which is offered them. Osler has described a case of cancer of the stomach in which the mere visit to a consultant of sanguine temperament, though poor judgment, whose assurance of the patient that there was no possibility of cancer, resulted in a disappearance of all the symptoms and a gain of eighteen pounds in weight. It is this psychic influence, which has occasionally deluded the honest student of cancer cure, and which has also so generously played into the hands of the dishonest."

It is scarcely necessary to point out that when an investigator claims to have made certain discoveries and these of fundamental importance, before they can be accepted by scientific men, the fullest opportunity must be afforded for investigating the data upon which such claims are based, with details of methods sufficiently definite to permit of the repetition of the experiments by independent workers, and that failure of an investigator to submit his work to the recognized canons of science must tend to its being discredited.

The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Dr. Glover's serum are better than those obtained by similar methods introduced by others, and which have ultimately disappointed the hopes entertained of them.

In concluding this interim report, your committee wishes to state its readiness to examine any data not yet submitted, but which Dr. Glover may decide to place before it, and to collaborate in their findings with recognized authorities who have already expressed their willingness to do so or with others whom Dr. Glover himself may nominate.

All of which is respectfully submitted.

W. H. HARRIS, *Chairman*,  
H. B. ANDERSON,  
HERBERT A. BRUCE,  
JOHN J. MACKENZIE,  
JABEZ H. ELLIOTT, (*ex officio*),  
HARRIS MCPHEDRAN, *Secretary*.

The undersigned who were added to the Committee concur in the above report:

GEOFFREY BOYD,  
W. P. CAVEN,  
A. PRIMROSE.

Presented to the Council of the Academy and adopted. January 13th, 1921.

J. H. ELLIOTT,  
*President.*

F. C. HARRISON,  
*Honorary Secretary.*

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## News Items

A Medical Committee of the Canadian National Council for Combating Venereal Diseases was recently formed in Toronto. It is understood that for the present at least, its membership will consist of all physicians working on the staffs of Venereal Disease Clinics in Toronto.

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Among Canadians attending the All-American Conference on Venereal Diseases held in December were: Dr. J. A. Amyot, Ottawa; Dr. A. H. Disloges, Montreal; Dr. Gordon Bell, Winnipeg; Dr. R. R. McClenahan, Dr. Gordon Bates, Miss Ella Grant and Miss F. E. Brown, Toronto.

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Lt.-Col. T. F. Ritchie representing the Venereal Disease Division of the League of Red Cross Societies, Geneva, was a recent visitor in Toronto and Montreal.

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The Social Service Council of Canada has organized a Social Hygiene Commission which is doing good work in connection with investigating and carrying on work of a social hygiene character in which the units of the Council may take an active part.

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The 10th Annual Meeting of the Canadian Public Health Association will probably be held in the latter part of May as a Joint Meeting with the Ontario Health Officers' Association.

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It is announced that the Sherbrooke Chapter of the Daughters of the Empire will open a small hospital for tuberculosis patients at Sherbrooke. The Hull Chapter will establish a tuberculosis dispensary at Hull.

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The Committee on Journals appointed at the recent meeting of the Advisory and Consultative Committee of the Canadian Red Cross Society met recently in Toronto. The Committee decided to utilize the PUBLIC HEALTH JOURNAL as a medium through which news and information as to the activities of the various voluntary organizations in Canada may be given more adequate distribution.

Scientific articles and news notes from these organizations will begin to appear regularly in the PUBLIC HEALTH JOURNAL in the near future.

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Readers of the PUBLIC HEALTH JOURNAL will regret to hear that Sir William Gage, a pioneer in the tuberculosis field in Canada is seriously ill.

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The Muskoka Free Hospital at Gravenhurst suffered a severe loss by fire recently. Fortunately, as a result of commendably energetic work on the part of the staff, there were no fatalities.

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Under the leadership of Hon. Dr. Roberts, Minister of Health, New Brunswick, will undertake a health week campaign commencing on January the 30th.

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The Child Welfare Section of the Public Health Association is issuing a series of five folders on diets for children of various ages—from the technique of breast feeding to the proper food for children of school age.

These are printed in attractive form, folded for mailing, and may be purchased for \$1.00 per hundred.

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# Editorial

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## Regulars and Volunteers

**I**T is an encouraging sign of the times that the man in the street—that gentleman who is supposed to mean most in the affairs of the nation—is really beginning to take an active interest in public health. In things political he always did have a good deal to say. The policy of the new Premier—prohibition—the tariff—these were his meat and drink—while the hospital of his community, the tuberculosis sanatorium or his city's water supply were generally very much beneath his notice. Unless, perchance, he unluckily developed an acute pain in the region of McBurney's point, contracted a certain type of hacking cough with its characteristic, attendant symptoms or lost his daughter in a typhoid epidemic. Then he acted according to circumstances and sometimes in a hurry. Of course he might be a millionaire and benevolently inclined. In that case some of his donations might be beneficently, as well as benevolently applied—generally to the support of some cause which had to do with the cure of disease rather than its prevention.

But of recent years for some reason or other the situation has changed. Perhaps the war with its revelations as to the physical unfitness of the nation has had something to do with it, although one is inclined to think that there were symptoms of improvement even before the war. At any rate, the potent feeling that all must unite for the common good—that deep emotion which only a dangerous enemy common to us all brings to the surface, seems to have been translated in some degree to peace time terms.

The establishment of Ministries of Health in many countries is an indication that health matters have begun to assume a position of dignity in the affairs of men hitherto denied them. The active interest of numerous agencies such as the Rotary and other clubs and various voluntary health associations of laymen formed for specific purposes are a clear indication that people generally are willing and anxious to work for the attainment of an ideal which in previous years has been largely of academic interest.

And they look to the health officers for leadership. Willing they are to spend their time on the committees of volunteer societies—to contribute liberally of their money and to learn—in order that the lot of the average citizen may be cast in happier places, that he or she may attain that degree of perfection in citizenship which can be formed only where there is a sane mind in a sound body. It is a big job intrusted to the health officer in these sober and wiser

peace times. For the first time he reigns in a sphere acknowledged to be the most important. And the prayer of all patriots will be that he keep his forces—enlisted and volunteer—well in hand, that his leadership be vigorous and wise, and that his first order be no quarter to the enemy.

### New Conceptions

**T**IME was when our idea of the value of the hospital or clinic was a remote one. People were ill. They were poor. And the two problems must be met, otherwise the machinery of the community was cluttered up. More especially, however, the appeal of the poor person was an appeal to our pity. The appeal of the sick person was potent largely because the presence of the sick at large was somewhat of a nuisance.

The modern conception of the situation is somewhat different. It ill pays a state to support inefficient citizens. Early death is a loss, not only to the individual and his family, but to the community which loses his services and in the long run to each of us. We are beginning too to realize that most illness is due directly to the neglect of fundamental principles which stand for human welfare, that illness, death and resultant inefficiency in a community are the direct result of neglect on the part of the state and that they are, therefore, a state responsibility.

Both the hospital and the clinic under our new realization of their value from the community point of view come to be looked upon in a new light. The clinic is a repair shop for the ambulant ailing. At the same time it is a centre whence through a Social Service Department, possible disability, whether from infectious disease, malnutrition, or other cause, among those of the patient's family or others, may be investigated and prevented.

The hospital is a centre in which generally speaking the more seriously ill are nursed back to recovery, always with an eye towards keen investigation which may mean that further illness in the community may be prevented.

If this is not always true, it should be. Surely there should be a general realization that sickness does not pay from any point of view and that poverty is undeserving of the stigma which it commonly carries with it. That the community should care for those dependents who are its responsibility, should be obvious not in the grudging, disdainful spirit of the past, but in a spirit of eagerness to pay a just debt; not with anxiety to avoid responsibility, but to ensure safety for this and future generations.



## Book Reviews

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*Practical Massage and Corrective Exercises with Applied Anatomy*, by HARTVIG NISSEN. Fourth Revised Edition. F. A. Davis Company. Philadelphia, 1920.

The author treats a subject which the war has done much to bring to the fore, and this book being the fourth revised edition proves the increasing knowledge and necessity along the line of treatment by Mechano-therapy.

A brief sketch is given of the history of massage, including quotations from noted advocates of modern times, thus showing the growing recognition of the inter-relation of Massage and Remedial Gymnastics with Medical treatment.

Chapter 1 gives a concise outline of the physiological effects of movements and their beneficial results, passing on to note their classification and execution in the following chapter. There are chapters each of special interest on "the most essential applied anatomy," briefly stating the origin and insertion of muscles, with graded resistive exercises for the same. Special emphasis is made to the advisability of treatment for conditions of "stiffness of joints and tendons," also "flat foot"; stating cases examined and the treatment prescribed for the various conditions.

In dealing with the subject of "general massage," concise progressive treatment is outlined for neurasthenia, also abnormal conditions of the circulatory and nervous systems, including heart diseases. The following conditions are briefly described and occupy special sections, namely: diseases of the organs of digestion, curvatures, and muscular rheumatism, accompanied by suggested treatments for the same.

This new edition, as the author states, represents the results of what forty-five years of experience, practise, and teaching have taught him, and hopes it will be of value to those who wish to learn in a practical way to treat suffering humanity with Mechano-therapy.

"*Short Talks on Personal and Community Health*," by LOUIS LEHRFELD, M.A., M.D., and published by F. A. Davis & Co. of Philadelphia, Price \$2.00, is designed to instruct school children,

students, social workers and the best of all social workers—the mother.

This is not a book on treatment but takes up the preventive side of disease entirely. There is also a chapter upon dietitics. As the author suggests, the need for health talks and education generally must go hand in hand with sanitary legislation, and this short volume will prove a most useful text book for those undertaking such work. We take pleasure in commending it for its clearness, conciseness and simplicity and feel that these short talks upon Health will meet the purpose for which they were written.

G. D. P.

The December issue of the *Journal of the Outdoor Life* contains an excellent paper upon the *Campaign against Tuberculosis*, by DR. J. H. ELLIOTT. After presenting the views of the various medical authorities from early times to the beginnings of the modern campaign against tuberculosis with its Sanatoria, dispensaries, preventoria and other organized agencies including the important one of Notification, he shews how other diseases of a preventible nature such as Typhoid, Small-Pox, Malta Fever, Malaria and Yellow Fever have been handled. His conclusions are that "In a similar manner if we make a practical application of our knowledge of the causative agent of Tuberculosis, its method of transmission from man to man, and of conditions which cause its spread within the body, those which cause its progress to become arrested, those which lead to cure and those which make man susceptible to the disease, we should make similar progress in stamping out tuberculosis." In this he points out that "The failure of the Tuberculosis campaign has been because of the determination of effort toward the individual rather than toward the disease as a social malady and that efforts should be concentrated upon the larger issues of improvement in housing and general economic conditions."

G. D. P.

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# The Public Health Journal

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## The Activated Sludge Process of Sewage Disposal

GEORGE G. NASMITH, C.M.G.

Presented at the 35th Annual Meeting, Engineering Institute of Canada, Toronto, February 2nd, 1921.

IN discussing any system of sewage disposal it is necessary to know exactly what that system is capable of doing under the very best of conditions, and, what is of even more importance, to be sure of what it is likely to accomplish under average conditions. We need to know, in fact, not only the best but the worst features of any system.

An ideal system of sewage disposal should turn out a clear and stable effluent and an easily dewatered, inoffensive sludge; it should accomplish these results without causing offense during the operation and at the minimum cost. In practice a sewage disposal scheme is usually, unfortunately, a compromise between the results desired and the money available for building the plant.

At present there are three inoffensive method of sewage disposal that are capable, when carefully operated, of yielding a clear, stable effluent and a non-putrescible sludge. These are combinations of:

1. Sedimentation tanks, sludge digestion and trickling filters;
2. Imhoff or Travis tanks and trickling filters;
3. Activated sludge process and sludge digestion (or drying the activated sludge by centrifugal action, sludge presses and other means.)

The two first combinations are well-known and though the in-offensive digestion of sludge in separate single chambered tanks presents some difficulties, it can be, and is being done on a very large scale as at Birmingham and Baltimore.

## THE ACTIVATED SLUDGE PROCESS.

The activated sludge process now being developed is the subject of this brief review. Activated sludge, prepared by long continued agitation of sludge with air, is a brown, flocculent, gelatinous material largely composed of living bacteria possessing certain definite characteristics, and is capable of bringing about profound modifications in fresh sewage when agitated with it in the presence of air for a considerable length of time. After such treatment the settled sewage effluent is clear and practically all of the suspended and dissolved organic matter has been entrapped or converted into inorganic matter by the activated sludge. At the same time most of the bacteria have been removed from the sewage while the effluent has been rendered non-putrescible and comparatively innocuous.<sup>1</sup>

The activated sludge process is in itself relatively simple. The apparatus consists of tanks containing a quantity of activated sludge previously prepared, means for introducing air at the bottom of the tanks for aerating and agitating the mixture of activated sludge and incoming sewage, and other tanks or compartments for allowing the activated sludge to separate from the liquids. Mechanical means for agitating the mixture of activated sludge and sewage in presence of air will yield exactly the same results as agitation by means of compressed air, and experimental work now being carried on indicates the probability of such methods coming to the front in the near future.

The activated sludge process will, when the simple but essential conditions of operation are carefully observed, yield a clear, sanitary, non-putrescible effluent. The excess of activated sludge produced is, however, still putrescible, can at present not be cheaply or easily dewatered, and is difficult to dispose of. Should the dewatering problem be economically solved the activated sludge process of sewage disposal would immediately become more desirable and feasible than it is at present, chiefly for the reason that activated sludge has a high fertilizing value and is therefore, valuable from the standpoint of conservation. The activated sludge process as carried out at present, though embodying many good features, has some undesirable ones, and is by no means the last word in sewage disposal.



## ADVANTAGES OF THE ACTIVATED SLUDGE PROCESS.

The advantages of the activated sludge process of sewage disposal are, first—that the plant is comparatively simple in construction, consisting, as it does, of a series of tanks and means for injecting finely divided air at the bottom of the same. Second—that it will produce in the one operation an effluent that can be obtained in other systems only by a combination of operations. Third—that it is, during operation quite inoffensive, and fourth—that it can be carried on with the minimum amount of pumping.

Viewed from the standpoint of inoffensiveness, simplicity of operation and stable effluent, a combination of two-storey tanks and trickling filters may be quite as satisfactory as the activated sludge process. In fact, such a combination may be highly desirable where plenty of fall would make the operation almost automatic, where expert assistance is unobtainable or where economic considerations would make the activated system undesirable or even impossible.<sup>1</sup>

## DISADVANTAGES OF THE ACTIVATED SLUDGE PROCESS.

The inherent disadvantages of the activated sludge process over other combinations are not negligible,<sup>2</sup> Where improperly operated, the effluent is neither stable nor sanitary. Disinfectants and certain trade wastes are liable to destroy the activated sludge; under these circumstances it will take weeks to build up again the necessary volume of activated sludge. The filtros plates used for finely dividing the injected air are subject to plugging with smoke and dust,<sup>3</sup> in which case the areas of sludge not agitated are apt to undergo anaerobic decomposition, while there are inherent difficulties with air blowers and other mechanical features of the aeration system. Though attempts have been made to derive an income from the dried activated sludge as a fertilizer, the hope entertained have not as yet been realized in practice and it is doubtful if the day has yet arrived when the chemist or sanitary engineer is honestly justified in advising that an activated sludge system be constructed with the guarantee that the increased cost of the plant or the high cost of operation will be compensated for by the sale of sludge or other material derived from the process.

On the other hand, some cheap method of satisfactorily dewatering the sludge may entirely change our viewpcent in regard to this matter. The activated sludge system is unsuitable for

small communities or large institutions where an automatic system is highly desirable. <sup>4</sup> and <sup>5</sup>

#### PRESENT TENDENCIES IN REGARD TO THE SLUDGE PROBLEM.

With one group of investigators the object is to eliminate at the beginning of any process of sewage disposal as much of the organic sewage matter as possible in the form of sludge, and to leave an effluent which is finished or can be finished at a high rate of speed or is good enough to be disposed of after disinfection or without further treatment. <sup>6</sup> Such objectives are included in chemical precipitation processes and the activated sludge process, both of which necessitate the further disposal of enhanced quantities of sludge. For example, treatment with sulphurous acid at Lawrence gives an increase of 32% in the dried sludge over that obtained by plain sedimentation. <sup>7</sup>

With another group of investigators, the object is actually to convert into stable compounds and gases, through the destructive biological action of bacteria and other forms of life, as much as possible of the organic matter present in the sewage, leaving for final treatment the smallest possible quantity of stable sludge.

It is possible that both of these objectives may ultimately be included in the same system with entirely satisfactory results.

The questions of greatest interest to us at the present time are—a: whether this dewatering problem is soon likely to be solved, and—b: whether the problem of digesting sludge without offence and cheaply will revolutionize other methods and, if so, which will then be the more desirable process. And the present time we are unable to answer these questions. Huge works as at Birmingham <sup>8</sup> and Baltimore <sup>9</sup> have been constructed where a combination of plain sedimentation tanks, double-storey tanks, sludge digestion tanks and trickling filters are operating on a gigantic scale. On the other hand, activated sludge systems with a capacity of fifteen million gallons a day appear to be working satisfactorily in Houston, Texas; <sup>10</sup> while Milwaukee has committed itself to a municipal plant counting, it may be said, on a revenue from the sale of the dried activated sludge for fertilizing purposes to reduce the otherwise high cost of operation.

#### THE DEWATERING OF SLUDGE.

The dewatering of sludge can only be brought about in two ways, viz.: the expression of the bulk of the water present by pres-



sure methods such as the sludge press—a very cumbersome and objectionable process—or through the more recent method of centrifugal action. Both of these methods will produce a sludge cake containing from 75% to 80% moisture from which the remaining moisture must be removed by heat.

A centrifuge of the Basco Ter Meer type has been experimented with for a month at Milwaukee and promises to be more suitable for dewatering Milwaukee activated sludge than sludge presses. The machine is almost automatic in operation, occupies 15 minutes for each cycle, and will centrifuge from 2,000 to 4,000 U. S. gallons of sludge per hour. It takes a sludge containing 98½% moisture and reduces the moisture to from 79% to 85%. About 20% of the solids of the sludge pass over in the filtrate and it is expected that, with experience and improvements, it will prove more efficient and satisfactory than any type of sludge press hitherto tried out.

#### BY-PRODUCTS FROM SLUDGE.

Some have built their hopes upon methods designed to obtain some valuable by-product from sewage sludge—particularly fats, which are present in considerable quantities. Others have pinned their faith to methods for dewatering and drying sludge with the idea that the dried product will prove saleable as a fertilizer. A few believe that the B.T.U's in dried sludge, (4,000 to 5,000), will make it valuable as an ingredient to incorporate with coal dust in briquettes for fuel purposes. This last proposition is so absurd from the economic standpoint that it is merely referred to.

#### THE GREASE AND OILS IN SEWAGE.

Grease may be obtained from sewage in two ways: a—by mechanical means of separation which are not very efficient and b—by chemical means, which involves the employment of expensive chemicals to acidify the sludge. One such method, the Miles Acid Process, depends on the fact that sulphurous acid gas, a comparatively cheap material, when added to sewage, breaks up the soaps and frees the fatty acids which become entrapped with the colloids and solids of the sludge and are separated with them. When such acid sludges are dried copious fumes of sulphur dioxide and acrolein vapours are given off and the grease obtained by abstraction and distillation gives extraordinary amounts of tar and unsaponifiable matter.<sup>11</sup>

Even when treated by the Cobwell Process in which degreasing takes place simultaneously with dehydration, the results are grease and fatty acids, which have no marketable value at the present time, and a low grade 3% ammoniate. A town of 150,000 people would yield five tons of tankage and one ton of grease daily, but as the grease has value only when it has been refined and made into marketable products, it may readily be seen that no income can be expected from such a process and from that viewpoint the process may be dismissed from our discussion.

The sludge obtained at the Baltimore sewage disposal works in 1915 with sulphuric acid treatment had a very objectionable odour and dried on sand beds much less readily than good non-acidified sludge; no manufacturer would even consider the proposition of taking the fat which might be obtained from the Baltimore sewage works.

From this it may be seen that the acid process at present holds out few inducements or hopes of successfully solving any of the main difficulties of sewage disposal, though it may have a place in the disposal of trade wastes.

#### THE FERTILIZER VALUE OF SEWAGE SLUDGE.

Numerous experiments have shown that the dried sludge from sewage disposal works is a valuable fertilizer. Of the various kinds of sludge the activated sludge has a higher nitrogen and phosphoric acid content, is more readily available for plant growth and is therefore, the most valuable as a fertilizer as Bartow,<sup>21</sup> Nasmith and Mackay<sup>13</sup> and others have shown by many comparative tests with vegetables.

Imhoff sludge is also valuable as a fertilizer and is used with great success in growing vegetables in the vicinity of the main Toronto Sewage disposal works. In Baltimore 25c. a load is paid for the dried Imhoff sludge produced at the works.

At Milwaukee it is expected that the dried activated sludge will be sold as a fertilizer base, the price being based on the nitrogen content.

Improvements in dewatering sludge by centrifugal action or other means, or improvements in methods of digesting sludge may entirely change our present attitude with regard to sewage disposal and make one or other system the much more desirable.



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DISCUSSION ABSTRACTED FROM THE CANADIAN  
ENGINEER.

At 2.45 p.m., Wednesday, the municipal section resumed its consideration of the activated sludge process of sewage disposal. Willis Chipman complimented Dr. Nasmith very highly on his paper, which Mr. Chipman declared to be the fairest possible exposition of the present status of the sewage disposal problem.

F. A. Dallyn, engineering adviser to the Ontario Board of Health, related his experiences in regard to the activated sludge

problem, declaring that many of the old plants in the province can be reconstructed along the lines of this process cheaper and with better results than can be obtained in any other way. Mr. Dallyn also told of his trips to England to investigate the process, and of the efforts that have been made to dewater the sludge by pressing and centrifuging. The organic life in sludge contains 80-90% of water. Sludge is a consolidation of this organic life plus mineral matter. Fresh sludge reduced to 70% of water is near its best state of consolidation after pressing or centrifuging, depending upon the mineral matter present, he declared, and we cannot hope to get further along those lines. Whether the sludge can be reduced by biological means is another question. He understood that experiments along these lines had been successfully carried out by Dr. Watson, of Birmingham, and similar experiments had also been undertaken by the Ontario Board of Health, and had been successful to a marked degree.

The problem of disposal of the sludge is not one that is likely to bother small municipalities, said Mr. Dallyn. At Brampton, Ont., the disposal has caused no difficulty, and at Houston, Tex., the sludge has been lagooned without trouble. He would not care to predict exactly what the future of the process would be, but he was satisfied that within 15 years the problem will have been entirely solved. The activated sludge process is here to stay, he said, although some modifications of the methods of disposing of the sludge must naturally follow.

Mr. Dallyn drew attention to the fertilizer value of the sludge. He declared that the abbatoirs are gradually converting their product into feed for stock and chickens, and that they are withdrawing from the fertilizer business, and this field will in the future be open for the development of the sale of activated sludge. The Board of Health had conducted a number of experiments, said Mr. Dallyn, in regard to the fertilizer value of activated sludge, and had found that it hastens early maturity of the crops, as its nitrogen content is in readily available form.

I. H. Nevitt, who is in charge of the Morley Avenue sewage disposal plant at Toronto, stated that his main plant averages 3 1-3 cu. yd. of sludge per million gallons of sewage and has a water content of 80 to 82%, while the sludge from the small experimental activated sludge plant at Morley Avenue carries 89.8% of water. He did not care to quote any figures in regard to quantity of the activated sludge.



Mr. Nevitt described the efforts that are being made at Houston to dry the sludge with presses and indirect dryers, and at Milwaukee, Wis., with a Basco-Ter Meer machine. They had obtained a reduction of the water content to 70%. There are 35 of these machines in operation in Germany, where they were developed during the war, said Mr. Nevitt. The capacity of each machine is approximately 4,000 U.S. gal. per hour.

There are two plants at Houston, explained Mr. Dallyn. At the one, the sludge is being lagooned; at the other they are trying pressing and drying, but the dryers are not yet in operation, and there are yet some difficulties to be overcome. The sludge sticks to the conveyor, but the company that installed the conveyor is replacing it with another type which it feels certain will handle the sludge satisfactorily.

Willis Chipman called attention to the necessity for efficient practical operation of these plants. Many years ago, he said, the septic tank was the standard sewage disposal plant. He recently was in a small town where he was asked to examine the sewage disposal plant, and he found a septic tank that was full of sludge from top to bottom, with the raw sewage running through it. If that is the way the septic tanks are handled what can we expect, he asked, of the activated sludge process, with possible interruptions of power and air supply, unless there is some constant supervision on the part of the Provincial Board of Health or other authority? If there is no such constant supervision, the activated sludge process will be a failure in the smaller towns. The spraying filters can readily be fixed when repairs are needed, but the maintenance of machinery in connection with the activated sludge process and the disposal of the sludge are two problems that yet must be satisfactorily solved before the activated sludge process can be safely entrusted to the smaller municipalities of Ontario.

William Storrie, of Gore, Nasmith & Storrie, said that his firm had recently been consulted by an Ontario municipality in regard to sewage disposal, and they had been forced to tell the city that they were not warranted in going ahead with any programme of sewage disposal at the present time, as in their opinion we are just on the verge of important developments in the art of sewage disposal.

Mr. Dallyn: The Board has since 1909 operated an experimental station to examine and develop processes for the treatment of sewage and purification of water in order that the Board might direct the municipalities along safe and economic lines of development.

Mr. Dallyn stated that the Ontario Board of Health has consistently held up sewage disposal programmes for the past five years, believing, as did Mr. Storrie, that there would be developments. The only programmes which the Board had permitted to advance, he said, are those which have been forced upon the municipalities by legal proceedings that have been taken against the municipalities for causing nuisance.

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# Educational Possibilities

BY MRS. L. A. HAMILTON.

Read at the annual meeting of the Canadian Public Health Association, Vancouver, B.C., June 21st, 1920.

## SEX EDUCATION.

**I**N recent years a large number of the most enlightened people have turned to education in their search for progress towards the solution of the great sexual problem; it is from experience of such people that I will draw, in laying before you some arguments in favour of sex education.

"Education," says Maurice A. Bygelow, of Columbia University, "has become the modern panacea for many of our ills, hygienic, industrial, political and social. In every phase of life we are looking to knowledge as the key to all significant problems. It is truly the age of education, not education offered in schools and colleges, but education in the larger sense, including the learning of useful knowledge from all sources whatever. It is most natural, therefore, that we should turn to it in these times when we have come to realize the existence of amazing sexual problems caused either by ignorant misuse or deliberate abuse of the sexual functions.

"If education is to solve the civic, hygienic, and industrial problems of to-day and to-morrow, why should it not also help with the age-old sexual evils.

"Now the problem of educational attack on sexual disharmonies is so new and so immense that it has seemed best to label this phase of education by a special name.

"Sex education in its largest sense includes all scientific ethical, social and religious instruction and influence which directly or indirectly may help young people prepare to solve for themselves the problems of sex that inevitably come into the life of every normal human being. Note the carefully guarded phrase 'help young people prepare to solve for themselves the problems of sex.' For like education in general, special sex education cannot possibly do more than help the individual prepare to face the problems of life."

Again. In the opinion of Dr. Helen Wilson, Lecturer for the British Council for Combatting Venereal Diseases,—

"When we speak of education we mean something much wider and much deeper than warnings about particular evils. Such warnings are needed, but they may be actually mischievous unless they have, as a background, some sound knowledge of the normal and the good. Facts alone, whether they be facts on health or disease, are not sufficient.

"Who is to undertake this great task of education?

"It should not be left to special teachers; there is a real danger of focussing the attention of young people too much on this particular aspect of life; the teaching should be largely incidental and should come naturally in the ordinary course of education.

"Most people are agreed that the foundations should be laid in childhood. There is less agreement on the question as to who is to lay these foundations. It ought to be the parents, and there are to-day parents in all classes of society who are discharging their duty admirably, but it has to be acknowledged that a very large proportion of parents are unable or unwilling to undertake the work. Hence the school is called upon to do it for them. Even if the home is all it should be the school would still have to play a part in supplementing the work of the parents. Thus, on the teachers of to-day is laid a double and a very heavy task."

Someone has aptly said, "We must teach the teacher to teach the parent to teach the child."

It is wholly logical and practical for teachers well prepared in biologic branches to introduce details in their courses that shall wholesomely and progressively enlighten pupils from kindergarten through to High School concerning the transmission of life and the need of physical integrity therefor.

It is not necessary to teach evil. The laws of nature are wholesome and fascinatingly interesting to every normal child, provided the instruction is qualified and clean-minded.

Sir Francis Champneys, M.D., points out in a very informative pamphlet how elementary school teachers can help in the campaign against venereal disease.

1. By their direct influence on their scholars.
2. By indirect influence through the parents.

Two of the most frequent and pressing questions which confront the parents are:—

1. What shall be the mother's attitude?
2. When should sex education begin?

Dr. Beatrice Webb answers these questions as follows:—



"There is no doubt in my mind that it is the mother's duty and privilege as regards her girls and her little boys, with help from the father for the latter, as they grow to be about twelve. The duty must not be shirked, for it is not a question of the child being told or untold. If the mother does not explain, the child will learn in some other way, possibly in an undesirable way which may sadden its whole outlook upon life.

"The *time* for teaching is clear. It is as soon as the child asks. The child who is old enough to ask an intelligent question is old enough to have an intelligent answer. The age must vary with the make up of the child's mind.

"The earlier such teaching can be given the better, for to the little child 'the world is so full of a number of things,' so many of them mysteries, that it takes them all simply without astonishment. This mystery of birth and new life is accepted quite calmly as just one among the rest, and put away in the mind with others.

"*What* is to be taught is also clear. The truth and nothing but the truth. There must be no lies. The little child is very logical, also keenly instinctive; it knows when lies are told to it, and so comes to distrust grown-ups and becomes increasingly curious and sets about getting knowledge in some other way and saying nothing to those who have deceived it."

That a normal child, normally and decently taught, will regard these things naturally, is well illustrated by a story recently told me by a mother of her own little girl. The child had been much interested and somewhat impatient about a hatch of chickens, and remarked: "Mother, it takes a long time for little chickens to be born, and I want some kittens. Do cats lay eggs?"

The mother's spontaneous reply of "No, they lay kittens," brought out a satisfied and vehement exclamation of "*How* convenient!"

I will pass on now to another side of this question.

How do the older children, the adolescent group themselves regard sex education?

James E. Peabody, head of the Department of Biology in Morris High School, New York, answers this question in his pamphlet, "Sex Education in the Home and High School."

"Three years ago," he says, "we started a new course in biology for the upper classes. In this advanced course we discuss very frankly, even in mixed classes, the reproductive process through the mammals, and the relative importance of heredity, environment

and training. We emphasize especially the tremendous importance of right choices in marriage. The outline of my talk includes:—

“1. The process of reproduction.

“2. Hygiene of the reproductive organs.

“3. Heredity.

“I have had anywhere from ten to forty boys at these various afternoon conferences, and the same work is undertaken for the girls by a woman graduate of Vassar.

“Before leaving the conferences both boys and girls are asked to answer anonymously in writing half-dozen questions.

“It is noteworthy that 78 per cent. of both boys and girls had not been taught the facts of sex by the parents or other relatives. Fifty-five per cent. of the boys had heard that sexual intercourse was necessary for health, although one boy remarked, ‘I did not believe it, because of the health of monks and holy men who are noted for purity.’

“Asked as to their judgment of the value of these conferences both boys and girls were very definitely in favour.

“‘Absolutely necessary,’ wrote 23 per cent., while others said, ‘The most essential things I ever heard.’

“‘They ease one’s mind.’

“‘They should be given in all schools.’

“I think such things as sex conferences are the most important and the most interesting things that I have heard since in school.

“‘Prevents girls from going wrong.’

“‘Clears up many mysteries in my mind.’

“‘Why can’t we have more of these classes? They are just what we’ve been longing for.’

“‘The evil results from self abuse were never so brought home to me.’

“‘I have learned much concerning things that I feel would have done me good some time ago.’

“With regard to the girls, 85 per cent. of the mothers expressed hearty approval, 6 per cent. made no comment, and 8 per cent. disapproved.

“A great deal of literature is now to be found approved by the different organizations and produced by individuals and thinkers. We find that there is a great demand for all of this, especially amongst mothers. This covers the field of helping the parent, as well as giving literature direct to the child. The book, ‘The Cradle Ship,’ is particularly beautiful and can be read to a child of three. I feel that in a good many of the biological books more courage



might be shown when the question of human reproduction is dealt with. So often here writers seem to fail and to become frightened of their subject. It is granted that it is difficult to explain matters to the children, but there seems to me a great danger of writers suggesting mystery and something "not nice" by falling short at this point.

"It seems to me evident, in view of all that has been quoted, that a great and new responsibility now rests upon any whose eyes and ears are open to the miseries and despair of those who justly say: 'Why was I not told?'

"Before closing I wish to warn against a tendency at the present time to emphasize the medical and biological side of the sex problem to the exclusion of the spiritual. It is admitted that religious teaching has in the past treated this problem indirectly and ministers will assure us that the catechism instructs young people to "keep their bodies in purity and chastity"; but unexplained and uninterpreted these words are a mere shibboleth not understood by the average child and often not appreciated till too late.

"The religious side of the question *can* be given intelligently, and I venture to say that plans of instruction will break down unless they have a religious foundation and carry with them something of the fundamental Laws of God and of the punishment for their infringement.

"We should, however, not over-emphasize the religious appeal, nor, on the other hand, make it obscure, but it must be plainly pointed out that the body is the Temple of the Living God.

"Just a word in closing about love and marriage.

"We need to set up better ideals for both.

"At present there is a great outcry about divorce and the breaking up of Christian homes. If homes are Christian, that very fact will keep them from disruption, but it is hypocrisy to call those homes Christian where people hate each other or are miserable and desperate—nothing more unchristian could be imagined. None of us who are decent like the idea of divorce made easy, but those who rail against divorce under any circumstances would be best employed by turning their attention to education for love and marriage and to fostering the real love instinct and home ideals. This will in the long run do more to prevent divorce than any fulminating from pulpits against the unhappy, the ill-assorted and the mismatched.

"It would be well for them to hold up love and marriage as very sacred gifts to be attained, and to set their faces against making them the subject of light jest and banter.

"In an article in the June Atlantic Monthly, called 'Boys and Girls,' Annie Winsor Allen, who has taught and studied boys and girls for a full generation, makes this pertinent statement:

" 'We must gradually, as fast as we can, give up the idea that sex is funny. If we think of it as a purely scientific physiological phenomenon of rare significance and extraordinary power, the time-worn jokes will cease to enter our consciousness and our conversation, because they will be actively irrelevant. There will be no association of ideas to draw them out. For we shall know that sex is our greatest blessing and shall co-operate heartily to banish all the mismanagement which makes it a curse.

" 'But to the suggestion that the sex-joke has got to go, the world says, "Impossible! It is as old as Adam!" Yes, and the drink-joke is as old as Noah, and the hell-joke is practically dead in educated America, and the drink-joke can hardly raise a smile, it is so feeble. The first has died because children are no longer threatened with hell and grown people no longer think about it. The second is moribund because liquor is less and less familiar to children and by grown people it is more and more disused and disapproved. A joke needs a basis of familiar reality from which to turn its somersault. Even now the sex-joke has disappeared where the grown people have ceased to misuse sex, and the children regard it simply as a scientific fact. Thus science is rapidly removing many of our old-time errors and the reliable old jokes that went with them. Nature is never funny. Fun implies choice, and there is no choice about a scientific fact. It is merely so.'

"We might with such education hope to see marriage entered into with more seriousness and less haste and selfishness. I will conclude by quoting from Mrs. Pethick Lawrence's article on 'Education in Love.'

" 'The child that has not gained from its first lover, its mother, its earliest vision of the delight of friendship and the great creative magic of love has been defrauded. We know how to hate, as Diderot said, but we have not learned how to love. We have not yet learned, but by making ourselves once more as little children, we can begin to find our way into this Kingdom of Heaven and take possession of it. From the hearts of little children must spring that future era to which we turn with hope from the wide-spread



desolation of to-day. Our task is to prepare the ground and sow the seed. Let us do it with the realization that it is by love alone that men and women may be transformed into likeness with the Creator and can enter into vital union with the whole creation of which they are a sentient part. Thus shall we pass on to our children, with the knowledge and understanding of love, the full inheritance of life.' "

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# The Prevalence of Malnutrition in the Public School Children of Ontario

ALAN BROWN, M.B. and G. ALBERT DAVIS, B.A., M.B.

PREVIOUS to the war very little attention was paid to the question of malnutrition in older children, but in the examination of recruits so many men were found to be unfit for military services as a result of conditions following malnutrition, that attention was then brought to bear on the condition as it appeared in children. It was found in the drafts for the United State army that one man out of five was unfit for active military service on account of physical disabilities brought about by malnutrition. Unfortunately we have not the corresponding figures for the Canadian army, although it is probable that the same proportion of disability would be present in our own country.

Surveys to ascertain the extent of malnutrition existing among school children have been made in various places. In New York, in the borough of Manhattan, of approximately 175,000 children who were examined 2.15 per cent. were found to be undernourished<sup>1</sup> A recent writer<sup>2</sup> mentions 40 per cent. of a certain school in Kansas City as being undernourished. Many other surveys have been made in England and in the United States, but as far as we are aware no such work has been undertaken anywhere in Canada. With the idea of determining how much malnutrition was present in Canadian cities a survey was made of some of our Toronto schools.

There are various standards that one may adopt in determining the existence of malnutrition. The one which we have chosen is the relationship of weight to height, irrespective of age. The height and weight chart employed by us was prepared from measurements by Boas and Burke for older children and for the earlier years from approximations of records by Holt. Altogether the heights are averages of 45,151 boys and 43,298 girls, and weights of 68,000 boys and girls. It is to be noted that the chart is different to that of Wood's where age is taken into considera-

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tion. The reason for adopting the former set of standards in preference to Wood's is, that we feel the correct method is to disregard the age of the child, and to consider his height and weight only.

The survey was made in conjunction with the Department of Public Health of this city, through which department the nurses, who did the actual measuring and weighing, were supplied. Heights were taken with boots on, and an allowance made for the height of the heels. A little experience in this matter soon makes one quite proficient. Similarly, with the weights, allowances of one-half to one and a half pounds were made for boots according to the size and appearance of the latter.

The original intention in making the survey was to choose four schools representing the different types of our school population. To these four schools, however, has been added a fifth, where a mental survey of each child was being carried on under the direction of the Canadian National Association for Mental Hygiene. In this instance measurements and weights were made by the same individual making the mental survey, and these records have been added to our own.

The first school surveyed was York Street, where there is practically eighty per cent. foreign population. This school is situated in the down-town warehouse and small shop district. In this locality the population is very cosmopolitan, and includes Chinese, Japanese, Russians, Jews, Italians, and so on. Following this the children of Brown School were weighed and measured. This school is located in one of the best residential districts of the city, and contains children of parents in good financial circumstances. Withrow School, consisting of children of middle class parents, and Dufferin School, with children of the lower type of English-speaking people, were the remaining two schools chosen. Western Avenue School, where the mental survey was also made, is in a good residential district; and socially stands between Brown and Withrow Schools.

In estimating the amount of malnutrition in the various schools, two standards have been employed. Emerson states that a child 7 per cent. or more underweight for his height is malnourished, while Holt consider a child 10 per cent. or more underweight for his height up to ten years of age and 12 per cent. from ten to sixteen years as belonging to this class. Both determinations have been made. In Tables 1, 2, 3, 4 and 5 will be seen in order the results obtained in the various schools. For convenience the results of each school have been placed together as seen in Table 6. Our

results in these schools have been so striking that an estimate based on the relationship of weight to age was made in two schools, Withrow and York, and the results are seen in Tables 7 and 8. In Table 9 the results have been tabulated according to the grade in school in order to see whether there existed any difference in the amount of malnutrition present at the various ages. Finally in Table 10 will be seen the results of the mental survey made in conjunction with the nutritional survey. This was done to determine if possible whether there was any relationship between malnutrition and mental backwardness, as evidenced by the Binet-Simon method.

When we come to analyze our results we see that the greatest amount of malnutrition is present in the children of middle class people of native birth. The well-to-do, as also the foreigners, show the least amount of malnutrition. In Table 9 we see that malnutrition varies only to a slight extent in the different grades, and that it does not tend to decrease as the child gets older. From Table 7 it will be seen that the children in Withrow School, which probably holds true for the children of other middle class schools, are tall for their age; while the foreigners in York Street School (Table 8) are short for their age. These latter findings confirm us in our belief that the correct method of determining existent malnutrition is by the relationship of weight to height, irrespective of age. We, therefore, feel that the height and weight chart used in this survey is the best obtainable at the present time, and in the majority of instances shows the correct state of the child's malnutrition.

The mental survey made in one school of 336 children confirms the results found by Blanton in the public schools of Trier, Germany; namely, that malnutrition, even when prolonged, affects to a very slight degree the intelligence of a child, as determined by the Binet-Simon method. However, children suffering from malnutrition shows a lack of physical and nervous energy which results in poor school work, and generally affects behaviour so that these children often appear listless and stupid. This latter finding is in agreement with the opinions of those handling classes of malnourished children, whose experience has been that as the state of a child's nutrition improves so does his mental condition.

#### SUMMARY.

1. Of 2,843 children examined, 1,256 or 44 per cent. were 7 per cent. or more underweight and 751 or 26 per cent. were 10-12 per



cent. or more underweight. Some may not be disposed to consider a child 7 per cent. underweight as malnourished, but a child 10 per cent. or more underweight is surely in a serious condition, and needs attention.

2. Estimating our total school population as 79,000, 26 per cent. or 20,540 are undernourished and in a serious state of health.

NOTE.—The authors are indebted to E. J. Pratt, Ph.D., for the mental survey conducted by him under the direction of the Canadian National Association for Mental Hygiene, and to the Misses Wheeler and Emory and the nurses in the various schools attached to the nursing staff of the Department of Health, for the routine weighing and measuring of the children.

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TABLE 1.

#### YORK ST. SCHOOL.

| Grade                    | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|--------------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten .....       | 25            | 36           | 14             | 20           | 68    |
| Junior & Senior 1st..... | 18            | 25           | 9              | 212          | 70    |
| Junior Second .....      | 5             | 17           | 1              | 3            | 29    |
| Senior Second .....      | 10            | 28           | 4              | 11           | 34    |
| Junior Third .....       | 11            | 27           | 1              | 17           | 40    |
| Totals .....             | 69            | 28           | 35             | 14           | 241   |

TABLE 2.

#### BROWN SCHOOL.

| Grade              | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|--------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten ..... | 31            | 32           | 18             | 19           | 95    |
| Junior First ..... | 29            | 32           | 16             | 18           | 89    |

|                     |     |    |     |    |     |
|---------------------|-----|----|-----|----|-----|
| Senior First .....  | 28  | 43 | 21  | 32 | 65  |
| Senior Second ..... | 25  | 20 | 13  | 10 | 127 |
| Junior Third .....  | 38  | 24 | 3   | 2  | 158 |
| Senior Third .....  | 43  | 31 | 26  | 10 | 136 |
| Junior Fourth ..... | 39  | 31 | 21  | 17 | 124 |
| Senior Fourth ..... | 25  | 27 | 13  | 15 | 88  |
| Totals .....        | 258 | 29 | 131 | 14 | 882 |

TABLE 3.

## WITHROW SCHOOL.

| Grade               | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|---------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten .....  | 39            | 51           | 25             | 32           | 76    |
| Junior First .....  | 49            | 56           | 36             | 41           | 86    |
| Senior First .....  | 40            | 56           | 29             | 40           | 71    |
| Junior Second ..... | 32            | 45           | 17             | 24           | 70    |
| Senior Second ..... | 54            | 67           | 33             | 41           | 80    |
| Junior Third .....  | 42            | 51           | 23             | 28           | 82    |
| Senior Third .....  | 59            | 56           | 38             | 36           | 104   |
| Junior Fourth ..... | 28            | 53           | 22             | 42           | 52    |
| Senior Fourth ..... | 19            | 38           | 9              | 18           | 49    |
| Totals .....        | 362           | 54           | 232            | 34           | 670   |

TABLE 4.

## DUFFERIN SCHOOL.

| Grade               | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|---------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten .....  | 51            | 75           | 39             | 57           | 68    |
| Junior First .....  | 95            | 71           | 66             | 49           | 133   |
| Senior First .....  | 66            | 62           | 40             | 38           | 105   |
| Junior Second ..... | 43            | 57           | 25             | 33           | 75    |
| Senior Second ..... | 45            | 58           | 25             | 32           | 77    |
| Junior Third .....  | 32            | 43           | 12             | 16           | 74    |
| Senior Third .....  | 35            | 50           | 20             | 29           | 69    |
| Junior Fourth ..... | 26            | 53           | 14             | 28           | 49    |
| Senior Fourth ..... | 12            | 33           | 3              | 8            | 36    |
| Junior Fifth .....  | 11            | 57           | 8              | 42           | 19    |
| Senior Fifth .....  | 3             | 33           | 2              | 22           | 9     |
| Totals .....        | 419           | 58           | 254            | 35           | 714   |



TABLE 5.  
WESTERN AVENUE SCHOOL.

| Grade               | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|---------------------|---------------|--------------|----------------|--------------|-------|
| Junior First .....  | 8             | 28           | 3              | 11           | 28    |
| Senior First .....  | 3             | 20           | 2              | 13           | 15    |
| Junior Second ..... | 24            | 46           | 17             | 32           | 52    |
| Senior Second ..... | 7             | 33           | 6              | 28           | 21    |
| Junior Third .....  | 26            | 33           | 8              | 10           | 77    |
| Senior Third .....  | 42            | 60           | 24             | 34           | 70    |
| Junior Fourth ..... | 25            | 54           | 12             | 26           | 46    |
| Senior Fourth ..... | 13            | 48           | 7              | 26           | 27    |
| Totals .....        | 148           | 44           | 79             | 23           | 336   |

TABLE 6.

| School.                       | 7% or more<br>per cent. | 10% or more<br>per cent. |
|-------------------------------|-------------------------|--------------------------|
| York Street 80% foreign ..... | 28                      | 14                       |
| Brown School .....            | 29                      | 14                       |
| Western Avenue School .....   | 44                      | 23                       |
| Withrow School .....          | 54                      | 34                       |
| Dufferin School .....         | 58                      | 35                       |

TABLE 7.  
WITHROW SCHOOL—WEIGHT TO AGE.

| Grade               | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|---------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten .....  | 20            | 26           | 10             | 13           | 76    |
| Junior First .....  | 20            | 23           | 12             | 14           | 86    |
| Senior First .....  | 16            | 22           | 12             | 17           | 71    |
| Junior Second ..... | 15            | 21           | 8              | 11           | 70    |
| Senior Second ..... | 25            | 31           | 13             | 16           | 80    |
| Junior Third .....  | 20            | 24           | 12             | 14           | 82    |
| Senior Third .....  | 31            | 29           | 20             | 18           | 107   |
| Junior Fourth ..... | 19            | 31           | 13             | 21           | 62    |
| Senior Fourth ..... | 17            | 28           | 11             | 18           | 60    |
| Totals .....        | 183           | 26           | 111            | 16           | 694   |

TABLE 8.  
YORK STREET SCHOOL—WEIGHT TO AGE.

| Grade              | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|--------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten ..... | 25            | 36           | 15             | 22           | 68    |
| Junior First ..... | 5             | 16           | 4              | 12           | 31    |

|                     |    |    |    |    |     |
|---------------------|----|----|----|----|-----|
| Senior First .....  | 20 | 51 | 16 | 41 | 39  |
| Junior Second ..... | 8  | 27 | 6  | 20 | 29  |
| Senior Second ..... | 11 | 32 | 6  | 17 | 34  |
| Junior Third .....  | 14 | 35 | 7  | 17 | 40  |
| Totals .....        | 83 | 34 | 54 | 22 | 241 |

TABLE 9.

MALNUTRITION—ACCORDING TO GRADE IN SCHOOL.

| Grade               | 7% or<br>more | Per<br>cent. | 10% or<br>more | Per<br>cent. | Total |
|---------------------|---------------|--------------|----------------|--------------|-------|
| Kindergarten .....  | 146           | 47           | 96             | 31           | 307   |
| Junior First .....  | 199           | 49           | 130            | 32           | 406   |
| Senior First .....  | 137           | 53           | 92             | 35           | 256   |
| Junior Second ..... | 104           | 46           | 60             | 26           | 226   |
| Senior Second ..... | 141           | 41           | 81             | 24           | 339   |
| Senior Third .....  | 179           | 47           | 108            | 28           | 379   |
| Senior Third .....  | 179           | 48           | 108            | 28           | 379   |
| Junior Fourth ..... | 118           | 43           | 69             | 25           | 271   |
| Senior Fourth ..... | 69            | 34           | 32             | 16           | 200   |
| Junior Fifth .....  | 11            | 57           | 8              | 42           | 19    |
| Senior Fifth .....  | 3             | 33           | 2              | 22           | 9     |
| Totals .....        | 1256          | 44           | 731            | 26           | 2843  |

TABLE 10.

- Average Intelligence Quotient for 94 normal and over-weight children—101 per cent.
  - Average Intelligence Quotient for 45 7% to 10% under-weight children—101 per cent.
  - Average Intelligence Quotient for 104 10% or more under-weight children—98 per cent.
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# Social Background

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## City Committee on Unemployment

Buffalo, N.Y., 1920-1921.

**S**TATEMENT and recommendations of the following committee appointed by the Buffalo Bureau of Public Welfare, December 18, 1920: Frederic Almy, chairman; Dr. Frances M. Hollingshead, secretary; John J. Aeschbach, E. J. Barcalo, Rev. J. C. Carr, Theodore L. Richmond, Frank E. Wade, Cecil B. Wiener.

This same committee is also the Committee on Unemployment of the Buffalo Social Welfare Conference, established in 1889, which is composed of seventy local social agencies.

- |                      |                        |
|----------------------|------------------------|
| 1. Public Work.      | 6. Classification.     |
| 2. Private Work.     | 7. Promptness.         |
| 3. Part Time Work.   | 8. Advertising Relief. |
| 4. Charitable Funds. | 9. Un-befriended.      |
| 5. Work Tests.       | 10. RECOMMENDATIONS.   |

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## HOW TO MEET UNEMPLOYMENT

Buffalo, N.Y., Dec. 30, 1920.

The following suggestions are drawn chiefly from the elaborate 1917 Report of the New York City Committee on Unemployment, appointed for the winter of 1914-15. In 1916 the committee issued a report on what was done, and in 1917 a fuller report on what to do next time, for the committee believes that preparedness is the best preventive.

Almost equally valuable are the issues of the Labor Legislative Review for November and for June, 1915, describing especially public relief work.

The Charity Organization Bulletin for November, 1914, has valuable suggestions and warnings as to the approaching crisis. Then, as now, the chief charity organization societies of the country had a weekly exchange as to conditions and action.

"In the opinion of competent observers the difficulties all go back to one root cause—failure to act in advance of the emergency." (Review, p. 573). Preparedness may halve the trouble.

### 1. PUBLIC WORK.

"We are too prone to forget that the only adequate remedy for unemployment is employment." (N. Y., p. 12).

In 1914-15, "at least twenty-four cities appointed Mayor's Committees, or joint committees of public officials and private citizens." (N. Y., p. 50; Review, p. 498).

In Buffalo in 1914-15 no public work was given except snow shovelling. The number sleeping on the floor in police stations, as reported daily to the C. O. S. rose to 500. This stopped on January 9th when the city opened quarters for 200 men at the Broadway Auditorium, with bath and meals, and on February 6th, for 500 more in a warehouse on Lloyd Street, where men slept on the floor but had two meals.

Better than this, less debasing, and without more cost to the City, would be public work when available. Stoppage of work means stoppage of income, and with the majority of workers resources are soon exhausted. Men of the better sort want work, not relief, and this the relief societies are not organized to supply. The city has work to give, as well as funds. "Fifty-six cities report public work for the unemployed in 1914-15, and 52 report that it was successful." (Review, p. 575). It is possible in winter, "to undertake outdoor improvements at a normal cost in spite of the employment of many men not previously experienced," but this requires efficient supervision and selected men. (N. Y., p. 85).

Already, in 1920, a few progressive mayors have made an appeal to the various public departments, City, County and School, to promote public enterprises. Rather than spend money for debasing relief which the better men do not want, the City should expedite all needful public work, limiting it strictly to residents, and to men physically fit, and giving preference to married men, or giving them more days work per week than the single men, so that decent sustenance is possible without more aid.

Bids on twelve public schools are to be opened January 19, 1921. Winter building may be unprofitable, though a new theatre is now being built near Main street, but immediate work could be done on these 12 sites, in excavating and clearing, either by the City direct



or on separate contract. In November, 1914, Chicago reported that three new schools would be built at once instead of in the spring.

Possibly other public work for the City or County could be advanced to meet the emergency, such as the proposed development of Bird Island as a recreation park, a driveway on the north side of Scajaquada Creek, or the making of advance supplies for City and County institutions. In 1914-15 Alameda, Cal., had its health department records indexed, as relief work; in Cleveland, women made garments for public institutions; and in St. Louis, bathing suits for the City swimming pools.

Oppressive summer heat may delay work as much as winter cold. "In Dayton, O., it is officially stated, water pipe was laid with the ground frozen eighteen inches deep at a lower cost than under the usual conditions." (Review, p. 571). Detroit has found the digging of sewers in frozen ground no more expensive than under the blazing summer sun." (Review, p. 183).

In Duluth, which has "adopted the policy of building sewers throughout the winter in order to equalize the amount of employment." (Review, p. 183) the Commissioner of Public Works says, (Review, pp. 571, 576) that it was "done as well and as economicaly as by ordinary methods." The frozen surface proved "of decided advantage in retaining the walls of the trench in position." "Every man was required to do a good day's work. . . . Good management is imperative. . . . The success of this work depends largely upon the intelligence and competence of the foreman." Over 50 cities, some with severe winter climates, made similar reports. (Review, pp. 183, 571). Where City work must be by contract, or where City funds were not immediately available, various devices were used. (Review, p. 572).

City governments may find it more advantageous to undertake extensive improvements at times of depression as regards a favourable money market, or plentiful supply of labour, lowered cost of materials, and eagerness of contractors." (N. Y., p. 35). In France and Germany cities deliberately reserve for slack periods such public work as is not urgent, in order that, like a sponge, it may absorb unemployment.

## 2. PRIVATE WORK.

Trade depression is largely psychological, due to sudden conservatism which decreases spending when it should increase. "The effects of trade depressions are accentuated and prolonged by the

exaggerated conservatism in spending which is apt to take hold of the consuming public during such depressions." (N. Y., p. 120). Private employers and individuals can help greatly by advancing repairs and alterations contemplated, and by purchasing imperishable household goods in advance of actual needs.

Indoor relief work is especially valuable in winter, and 1914-15 various social agencies opened work-rooms for "chair-caning, simple cabinet-making, cobbling, weaving, basketry and every conceivable kind of repairs to clothing and household articles." (N. Y., p. 98). "None of the articles made were sold in the open market." They "provided supplies for institutions supported from charitable contributions" and many were sent to the war zone of Europe, (and could still be so used) without competing with local industry.

The warning is given that "in the case of emergency employment everything almost is in favour of enterprise on a small scale." (N. Y., p. 92). There is less malingering, closer supervision, more variety, and suitable quarters can be found with less delay, or free of cost.

Bread lines and soup kitchens are universally condemned as unnecessary, indiscriminating and debasing, though bakeries, hotels, etc., with a surplus of perishable food which in normal times is wasted, might give on card to accredited persons; but "the provision of a nourishing meal at the emergency workshops in certain localities and under certain circumstances is decidedly helpful. During the winter of 1914-15, the (New York) Mayor's Committee on Unemployment was fortunate in securing the generous aid of 51 of the leading hotels and restaurants, and three clubs, in providing nourishing meals at 12 of the emergency workrooms." (N. Y., p. 108).

### 3. PART TIME WORK.

Better than relief or relief work is part time work by large employers. "The unemployment and distress may be largely, perhaps entirely, diverted by an intelligent spreading of the available employment over as many wage-earners as will give each of them a sufficient income to weather the storm." (N. Y., p. 14). "Such distribution of work, during the unemployment crisis of 1914-15 was by far the most potent influence in warding off distress. The Mayor's Committee addressed an earnest appeal to employers in the city to put employees on part time rather than reduce their working force." (N. Y., p. 24).



The warning is given that "with low-paid unskilled work, where at normal times the earnings of a full week only just suffices to support life," part time may increase distress, though generally helpful. "Care must be taken that the weekly earnings of the men employed do not fall short of the minimum requirements for the maintenance of the home." (N. Y., p. 86).

"In the building industry four weeks after a personal appeal to the Employers' Association, it was reported that 2,400 more men were employed under special arrangements for part time work than could have been possible without it. In the printing trades the unions themselves took action to withdraw members from their work for one day, and at times two days, in each week so as to lessen the number of those wholly unemployed. In any future period of depressed trade and industrial slackness, undoubtedly part time employment again will have to play a prominent role as the most effective means of preventing unemployment." (N. Y., p. 24).

Various forms of part time work are suggested. A shorter working day for the whole force is recommended, and gives "pep" to the work done. Closing for half days, or one whole day, each week "is immediately beneficial to the employees and thereby indirectly to the output." (N. Y., p. 26). "We do not feel at all apologetic in adding to the appeal of self-interest that of the public concern." (N. Y., p. 25). Shifts are also useful, and are better than reduction of force, which exposes "part of the normal working force to inactivity, mental distress and maybe starvation . . . and the loss from the installment and training of a new working force when business improves, should the dismissed employees seek and find employment elsewhere." (N. Y., p. 25). "We wish to propose that employers' organizations in each industry where they exist create standing committees as their special contribution to a city-wide preparedness programme against unemployment." (N. Y., p. 26). "It is suggested that the conclusions of the separate committees for the several industries be correlated, as far as practicable . . . by some suitable agency of the City government, or the Chamber of Commerce or the Merchants' Association." "Where employees are members of trade unions the labour policy to be agreed upon should, naturally, be a co-operative one." (N. Y., p. 26).

#### 4. CHARITABLE FUNDS.

It is said that in New York City in 1914-15, in spite of large sums spent upon relief employment and charity in various forms,

"there is not the slightest doubt that" the result of the provision made "to steady trade and keep people at work, together with the aid obtained by unemployed working people from trade unions, from credit institutions and from their own savings, was enormously greater." It should not "be necessary during a time of business depression to maintain able-bodied and willing workers out of charitable funds." (N. Y., p. 15).

New charitable agencies in an emergency, and large central agencies, widely advertised, are universally condemned. A central agency is invaluable for distributing information, to save applicants from being sent from pillar to post for work or aid, but a large central relief agency attracts unnecessary applications, and the better class of retiring persons, who shrink from exposing their urgent need in a crowded office, will dislike to apply.

Large central relief agencies also tend to close up the smaller ones, which is not as good as "making use of neighbourhood knowledge and diffusing relief through a hundred channels in close touch with individual persons and families, instead of one having no knowledge of them prior to their application for aid." (N. Y., p. 91).

"One of the needs most clearly shown during the crisis of 1914-15 was that of reassuring the public by authoritative statements that" existing agencies "were fully competent as well as willing to handle all the needed relief work, provided they were financially enabled to do so." (N. Y., p. 55).

Relief should be decentralized, and churches, the small societies, and individuals should help those known to them rather than unload upon central agencies. "In the panic of 1907 there were actually some 30 agencies that gave less relief and did less work than in the years of normally good times preceding." (Bulletin, p. 131).

## 5. WORK TESTS.

"Emergency relief employment cannot be used merely as a work test. . . . Work tests, under the best of circumstances, are of doubtful value. If a man be registered with a trade union or public employment office as willing to accept work under normal conditions on reasonable terms, that should suffice to establish his bona fides." (N. Y., p. 100). Mothers with young children who need their care should not be forced to unfamiliar work as a test, or electricians and narrow-chested tailors sent to a stone-pile.



As a work test it is suggested that "if a wood-cutting firm will check its steam-saw, utilize the services of selected men instead, and report accurately on the industry of each man, the arrangement has the advantage of displacing no independent labour. . . . One plan which has worked well is to induce charitable or other organizations to give indoor day's work which would not otherwise be paid for, such as scrubbing, window cleaning, dish washing and laundry work, to selected men and women, the society paying for the work after receipt of a careful report. This service avoids congestion, especially if arranged where no worker need travel unreasonably far." (Bulletin, p. 136).

Of course there must be some discrimination between voluntary and involuntary idleness. The New York City committee recommend that registration at some employment bureau for at least a week without being able to find work be obligatory as a condition to work relief, or any relief. (N. Y., pp. 126, 48).

#### 6. CLASSIFICATION.

In emergencies many want to do away with "red-tape" by helping without inquiring, but some classification is essential. Men of 60 and boys of 16, single and family men, hoboes and steady workers, cannot be treated alike. "The committee, then, submits as its first recommendation that, no matter how severe the unemployment crisis, a sincere effort should be made to classify those in need in some way not inconsistent with rapidity of action, so as to determine what kind of relief the individual is most in need of, or which is most likely to be appropriate to his or her capacity for self-help, possession of resources, station in life, family responsibilities, age, health, sex, etc." "Wholesale aid which does not allow of variation in kind and amount with the various needs of the beneficiaries is not only wasteful, but also ineffective, slow rather than quick, humiliating rather than stimulating. It misses its very object." (N. Y., p. 48).

#### 7. PROMPTNESS, FITNESS.

"First of all, we must visit every applicant with absolute promptness, within 24 hours at the very latest. Any slower service in emergency times means fundamental failure, and the nerves of the charitable will be steadied, moreover, by the assurance that prompt service is being given." (Bulletin, p. 136).

"Second only to promptness comes adaptability. . . . Our relief should make a loan to one without any work test whatever, should try another's capabilities by some temporary test, should give another the hardest work that can possibly be unearthed for him, should stave off the landlord's eviction notice for a fourth, place the fifth in a hospital, send the sixth and his whole family to the country, provide cash for the exceptionally provident buyer who is the seventh, relieve the improvident eighth sparingly with supplies plus conditions, and turn the ninth over to the social agency or the church which is largely caring for him." (Bulletin, p. 137).

### 8. ADVERTISING RELIEF.

Advertising relief funds attracts non-residents and floaters in spite of all notice that they will not be aided, and so defeats its own object. It is well to advertise relief stations, but not relief resources. If the poverty of relief only is advertised, subscriptions are increased and applications lessened.

In Buffalo in 1893 a widely advertised relief fund of \$63,000 brought non-residents and fakirs, and "out of 3,450 of the earlier applicants, 2,006 did not live at the address given." (Bulletin, p. 123).

"To discourage advertised centralization, however, is to double our responsibility for discovering and giving the best possible service to unbefriended cases of real need. This responsibility can be met by carefully planned approaches to school principals, clergymen, neighbourhood workers, workingmen and patrolmen. In 1893 one society in a small city asked each manufacturer to name a workman whom the shop trusted. These were invited to a meeting, and the plan worked out of placing a notice in each factory to the effect that cases of need were to be reported to the workman named. The name of the society did not appear on the notice, but these shop representatives were organized into one of its auxiliary committees." (Bulletin, p. 136).

### 9. UN-BEFRIENDED.

As has already been set forth, savings and credit should be used as far as possible and employers and churches should do all they can to take care of their own through part time employment and direct relief. The city and chief societies, should be called on only for those who are otherwise unbefriended.



RECOMMENDATIONS OF UNEMPLOYMENT COMMITTEE APPOINTED BY  
THE BUREAU OF PUBLIC WELFARE, AND BY THE BUFFALO  
SOCIAL WELFARE CONFERENCE.

Whereas, In the opinion of competent observers the difficulties in periods of unemployment all go back to one root cause—a failure to act in advance of the emergency; and

Whereas, The only adequate remedy for unemployment is employment.

We make the following recommendations:—

1. Immediate public work, indoor or outdoor, of every available sort, as less costly and less debasing than public relief. The work should be limited absolutely to residents, and preference given to family men, who might have three or four days' work a week, while the single men could be limited to one. Only needful work should be done, and unless the work is given only to selected men, and the supervision is of the highest quality, there will be waste. A little extra cost might be justifiable, however, in an emergency. The work should be at regular rates of pay and time.

2. An immediate effort to enroll all employers in co-operation for part time work instead of dismissal of men, using shorter hours, or full or half-day holidays instead of reducing the force. This is said by the New York City Unemployment Committee of 1914-15, to be "by far the most potent influence in warding off distress," and "the most effective means of preventing unemployment."

3. Suitable dormitory provision for single men, confined so far as possible to residents.

4. A relief fund, not widely advertised, and limited so far as possible to residents with families.

5. No central relief station, but a central bureau for information only.

6. Classification of all applicants (for efficiency and humanity) so that steady workers and hoboes, men of 60 and lads of 20, family and single men, shall not be treated alike.

7. Promptness, so that every applicant will be visited without fail within 24 hours.

8. Support of all existing agencies, rather than the creation of new ones which will be inexpert.

9. Decentralization, by urging employers, churches, and all local agencies to do all they can to take care of their own, so that the City and the chief societies shall be called upon only for those who are otherwise unfriended.



## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF DECEMBER, 1920.

#### COMPARATIVE TABLE.

| Diseases.                    | December, 1920. |           | December, 1919. |           |
|------------------------------|-----------------|-----------|-----------------|-----------|
|                              | Cases.          | Deaths    | Cases.          | Deaths.   |
| Small-pox .....              | 555             | 5         | 1,433           | 2         |
| Scarlet Fever .....          | 711             | 17        | 557             | 17        |
| Diphtheria .....             | 778             | 74        | 744             | 65        |
| Measles .....                | 973             | 7         | 1,026           | 14        |
| Whooping Cough .....         | 335             | 16        | 214             | 9         |
| Typhoid .....                | 59              | 25        | 51              | 21        |
| Tuberculosis .....           | 181             | 114       | 111             | 98        |
| Infantile Paralysis .....    | 7               | 3         | 7               | 2         |
| Cerebro-Spinal Meningitis .. | 7               | 7         | 26              | 9         |
| Influenza .....              | 39              | 9         | .....           | .....     |
| Influenzal Pneumonia .....   | 6               | 3         | .....           | .....     |
| Primary Pneumonia .....      | .....           | 242       | .....           | 188       |
|                              | <hr/> 3,651     | <hr/> 522 | <hr/> 4,169     | <hr/> 425 |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

| Diseases.        | Dec., 1920. | Dec., 1919. |
|------------------|-------------|-------------|
|                  | Cases.      | Cases.      |
| Syphilis .....   | 229         | 109         |
| Gonorrhoea ..... | 269         | 110         |
| Chancroid .....  | 9           | 5           |
|                  | <hr/> 507   | <hr/> 224   |



The reports of Local Boards of Health for Communicable Diseases for the last month of the old year shows small-pox is more prevalent in the Province than any month since March last. With the exception of the cities of Ottawa and Brantford, the cases may be considered more sporadic than epidemic as the 555 cases reported are from 29 counties affecting some 71 municipalities. Five deaths occurred during the month. The total cases for the year 1920 are 5,169 with 33 deaths.

The number of cases of diphtheria are the greatest for any month of the year, and the deaths are only 6 less than the month of February, when 80 were reported, being the highest death rate for the year.

Scarlet fever cases also are by far the greatest number of any month, but the number of deaths are comparatively small.

### MUNICIPALITIES REPORTING SMALL-POX.

| County      | Municipality     | Cases | Dths. | County | Municipality              | Cases | Dths. |
|-------------|------------------|-------|-------|--------|---------------------------|-------|-------|
| Algoma.—    | Sault Ste. Marie | 7     |       |        | Middleton                 | 1     |       |
|             | Blind River      | 4     |       |        | Northd. & Dur.—Ainwick    | 1     |       |
|             | Rydal Bank       | 17    |       |        | Ontario.—E. Whitby        | 5     |       |
|             | Plummer          | 4     |       |        | Oxford.—Blenheim          | 1     |       |
|             | Poplar Dale      | 9     |       |        | Tillsonburg               | 2     |       |
| Brant.—     | Brantford        | 61    |       |        | Parry Sound.—Byng Inlet   | 1     |       |
|             | Tuscarora        | 2     |       |        | Tarling Village           | 1     |       |
| Bruce.—     | Brant            | 5     |       |        | Perth.—St. Marys          | 2     |       |
|             | Elderslie        | 1     |       |        | Prescott & Rus.—Clarence  | 2     |       |
| Carleton.—  | Ottawa           | 161   | 1     |        | Rockland                  | 4     |       |
|             | Nepean           | 3     |       |        | Prince Ed. Is.—Wellington | 7     | 1     |
| Elgin.—     | St. Thomas       | 8     |       |        | N. Marysburgh             | 16    |       |
|             | Bayham           | 2     |       |        | Ameliasburg               | 6     |       |
| Frontenac.— | Kingston         | 5     |       |        | Hillier                   | 1     |       |
|             | Kingston Tp.     | 1     |       |        | Picton                    | 3     |       |
| Grey.—      | Sydenham         | 3     |       |        | Bloomfield                | 3     |       |
|             | Bentick          | 1     |       |        | Simcoe.—Orillia           | 3     |       |
|             | Sullivan         | 9     |       |        | Coldwater                 | 2     |       |
| Hastings.—  | Belleville       | 28    |       |        | Penetanguishene           | 1     |       |
|             | Stirling         | 6     |       |        | Midland                   | 1     |       |
|             | Rawdon           | 6     |       |        | Sudbury.—Sudbury          | 2     |       |
|             | Dungannon        | 6     |       |        | Massey                    | 1     |       |
| Huron.—     | Brussels         | 3     |       |        | Stormont, D., G.—Finch T. | 1     |       |
| Lincoln.—   | Niagara Town     | 1     |       |        | Temiskaming.—Tisdale      | 1     |       |
| Middlesex.— | London           | 6     |       |        | Waterloo.—Galt            | 3     |       |
|             | Strathroy        | 2     | 1     |        | Kitchener                 | 12    |       |
| Muskoka.—   | Gravenhurst      | 1     |       |        | Waterloo Town             | 20    |       |
|             | Bracebridge      | 13    |       |        | Welland.—Bertie           | 3     |       |
|             | Draper           | 2     |       |        | Pt. Colborne              | 1     |       |
|             | Macaulay         | 1     |       |        | Wellington.—Guelph        | 1     |       |
| Nipissing.— | Sturgeon Falls   | 7     |       |        | Harriston                 | 2     | 2     |
|             | Springer         | 3     |       |        | Wentworth.—Hamilton       | 19    |       |
|             | Mattawa          | 13    |       |        | E. Flamboro               | 1     |       |
|             | Madawaska        | 1     |       |        | York.—Toronto             | 30    |       |
|             | Dugal            | 1     |       |        |                           |       |       |
| Norfolk.—   | Woodhouse        | 2     |       |        |                           | 555   | 5     |

PETERBOROUGH EXAMINER (WEEKLY EDITORIAL),  
THURSDAY, JANUARY 27th, 1921.

In the case of Dr. A. S. Thompson, M.O.H., vs. the Township of Belmont and Methuen argued before Judge Huycke here in the Division Court, His Honour gave judgment for the plaintiff, Dr. Thompson, who brought suit against defendants—Belmont and Methuen township—to recover \$86 for work performed by him on order of the Provincial Board of Health in making a sanitary survey of the township schools.

Plaintiff stated that the work was ordered by the Provincial Board, but the local Board had refused to sanction it and had told him that it would not be paid for his services.

Reeve Griffith for the defense, stated that he thought the law was unreasonable and that the municipality had not received any benefit from the survey, and on that ground he had refused to sanction payment for the account, and relied for his defence upon the by-law appointing Dr. Thompson, which stated that his salary was to be based upon his tariff of fees for work performed by order of the local Board of Health.

Judge Huycke in his judgment said both parties had invited trouble by leaving status of salary so glaringly indefinite, and that the Doctor should not have accepted office under such a by-law, and that the municipality should never have expressed any such terms in the by-law. He held that Dr. Thompson was entitled to his claim for the work performed in accordance with the amount asked for, \$86.00, in that he was also a provincial officer by virtue of his appointment, and in duty bound to carry out the orders of that body.

O. A. Langley of Lakefield, for the plaintiff, F. D. Kerr of Peterborough for defendants.

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THE USE OF PHENARSENAMINE.

The following letter has been sent out by the Provincial Board of Health to all physicians in Ontario:

Toronto, Jan. 28th, 1921.

Dear Doctor:—

The following suggestions are sent to you with the approval of the Ontario Medical Association and will appear in Canadian Medical Journals in due course. It is hoped that these suggestions may be of some value to you in your practice.



In the administration of Phenarsenamine—(the Provincial Board of Health "606" preparation), or other arsenical preparations for the treatment of syphilis, the following points should be carefully considered:

*A. Before Treatment:*

1. Minor acute illnesses (such as colds, bronchitis, etc.), should be considered temporary contra-indications to intravenous treatment. It should be remembered that, occasionally, under Arsenical treatment, chronic skin diseases may become acute.
2. A fat person does not, as a rule, tolerate the drug so well as a spare muscular person.
3. Before antisyphilitic treatment is begun a urinalysis should \* be made.
4. The night before the administration of the drug a laxative should be given.
5. Solid food should not be taken by the patient for at least six hours before treatment.
6. The initial dose should not be more than 0.3 grams in men or 0.2 grams in women.

*B. Treatment:*

1. "606" preparations are more stable than "914" ones.
2. The treatment should be given with the patient in a recumbent position with the head slightly raised on a pillow.
3. With 606 or Phenarsenamine the solution should never be given more concentrated than 0.1 grams to 20 c.c. of freshly distilled water.

With neo preparations a concentrated solution 0.1 grams of the drug to 3 c.c. freshly distilled water may be used, provided it is given very slowly at a rate not exceeding 0.6 grams in two minutes. More dilute solutions given by the gravity method are less likely to cause reactions than concentrated solutions, particularly if the latter are rapidly administered.

4. The drug should be administered immediately it is prepared.
5. The strictest asepsis should be observed.

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\* An acute kidney lesion should be considered a contra-indication to the use of arsenical preparations.

*C. After Treatment:*

1. After administration the patient should be kept quiet (preferably recumbent) and under observation for at least half an hour. A hypodermic solution of adrenalin chloride should always be readily available for injection at the first sign of any reaction.
2. No solid food should be taken by the patient for at least four hours after treatment.
3. If signs of dermatitis or jaundice appear treatment should be discontinued.

Mercury should be given as part of the treatment. Intramuscular injections or inunctions appear to be the best method of administration.

Yours truly,

JOHN W. McCULLOUGH,  
*Chief Officer of Health.*

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# The Public Health Nurse in Ontario

BY J. J. MIDDLETON, M.B., D.P.H.

THE Public Health objective is to improve the health standard of all classes in the community, and to this end ways and means are being provided for educating the masses along the lines of public health and practical hygiene, supplying practical measures to preserve the health of the expectant mother, to bring home to mothers the importance of feeding infants rationally—that is, at the mother's breast, or failing this by scientific adjustment of cow's milk, sugar and water; to correct physical defects in young children, to prevent the spread of communicable diseases, and to lessen the incidence of disease in industrial occupations.

Although people of all ages are becoming increasingly interested in general public health matters in the Dominion, the need for which has been strikingly demonstrated by the great losses we sustained during the war, it is in childhood and youth that the most lasting impressions are made in teaching an important subject such as the preservation and maintenance of health. With this end in view the Public Health Nurse has stepped into the field, and her work is bound to bring most important results. She is the pivot in every community around which and from which all public health activities will radiate, for she alone is in a position to get intimately acquainted with the needs of the district, and to direct her energies along the lines in which they are most needed.

The duties of the Public Health Nurse will include home visiting, which will be carried out in a systematic manner, and will enable her to stimulate local interest in child welfare, and also detect, if possible, any cases of communicable disease such as tuberculosis, that are not under medical supervision.

The Public Health Nurse will point out such dangers, and will also report any cases of venereal disease or mental defectives that come under her notice. In her demonstrations, and in the holding of child welfare clinics the duty of the nurse will be, moreover, to work towards the ultimate establishment of a Health Clinic, in which Maternal and Child Welfare conferences, nutritional classes, consultations for tuberculosis and heart affections, and a dental service for adults and children may be provided for. The special province of the nurse is the health of expectant mothers, infants

and children, and she will endeavour to impress on mothers the fact that no food for infants is as good as that which nature intended for them. In addition, the nurse by means of home visiting becomes acquainted with conditions in her district, and gradually increases the sphere of her activities to include work along the various lines mentioned, until the health centre is a real factor for good in the life of the community.

In order that the Public Health demonstrations being given at present throughout Ontario may prove of permanent value, it is hoped that each district visited will decide to appoint a resident nurse to carry on the work begun. Although the sixteen nurses in the field only started two or three months ago, they have already demonstrated their usefulness, and the important results that will undoubtedly be brought to any community if their teachings and practical advice are carried out. Recently the Provincial nurses attended a round table conference in Toronto, which was also attended by the eight District Medical Officers of Health.

In any instance where lack of enthusiasm in the proposal to appoint a permanent nurse has been shown, it is only on account of the financial obligations that would have to be undertaken. This is the report that comes in from every section of the Province where Child Welfare Clinics have already been held.

The nurses have found that their demonstrations and the programme they have in view are appreciated by all classes in the community. Taking the standard of other progressive countries who consider one nurse to every 2,000 of the population a reasonable estimate for the country's needs, the Province of Ontario requires 1,000 Public Health Nurses.

The United States already has 10,000 of these nurses in the field, but are still 40,000 short of their ideal. Even with this shortage, authorities claim that a saving of 18,000 lives in one year has been largely effected.

Ontario is not lagging behind in this important feature of Child Welfare, and although the work has only just begun, the nurses are enthusiastic and predict important results from the work being carried on when the people have been sufficiently educated in Public Health to recognize its permanent value.

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## News Items

There are nearly 200 persons working on the various committees and sub-committees of the Toronto Branch of the Canadian National Council for Combating Venereal Diseases. Active committees include: Finance, Programme, Membership, Medical, Literature, Social Aspects, Speakers.

Additional committees to be formed in the near future include a Committee of Nurses and a Publicity Committee. Important parts of the campaign being undertaken in Toronto are lectures given in factories by National Council speakers and lectures to be given to audiences of school teachers and to parents.

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The Venereal Disease Division of the Dominion Department of Health have recently issued valuable booklets on various aspects of the Venereal Disease problem. Titles of the books issued to date are as follows:

"Information for Young Women about Sex Hygiene."

"Information for Parents—Teaching of Sexual Hygiene to Children."

"Venereal Diseases—Microscopic Examination."

"General Circular of Information Concerning Venereal Diseases to the Medical Profession of Canada."

These pamphlets are printed both in French and English.

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A synopsis of work done during 1920 has been issued by the Ontario Safety League. They carried on a voluminous correspondence with manufacturers, motorists, and others asking co-operation in the prevention of accidents and fires; showed motion pictures to school children; distributed safety literature in over 100 cities and towns in Ontario, held an essay on drawing contest, and in October the league conducted an intensive "Safety Week" drive.

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The 50th annual meeting of the American Public Health Association will be held at New York City in November, 1921. The date which is tentatively announced is November 14-18.

It is interesting to note that Dr. Stephen Smith, the founder and first president of the Association, is now entering his 99th year. He is still active and vigorous, and it is expected to celebrate his approaching centennial together with the semi-centennial of the Association.

The first organization meeting of the Association was held in New York City on April 18, 1872, and that is one of the reasons for selecting New York City for the celebration of the semi-centennial. Other considerations are the convenience to foreign representatives, and to Dr. Smith, who lives in New York City; and especially a plan to conduct demonstrations of public health administrative methods in the laboratories, executive offices, garbage disposal plants, and similar centres of public health interest, in which New York City is unsurpassed.

It is expected to present in connection with the celebration a review of the progress of the various branches of public health within the last fifty years. The sectional programmes will include Public Health Administration, Vital Statistics, Laboratory, Food and Drugs, Sociology, Sanitary Engineering, Industrial Hygiene, and Child Hygiene.

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The Health Week, which was planned for St. John, N.B., for week of January 31st, has been postponed till April.

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Dr. J. T. Phair has resigned his position as Director of School Medical Inspection, Department of Public Health, Toronto, to become Chief School Medical Officer for the Province of Ontario under the Department of Education.

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Dr. John S. Douglas has been appointed in charge of the branch laboratory of the Provincial Board of Health of Ontario, which has just been opened at North Bay.

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A conference of Public Health Nurses in Ontario will be held on February 11th.

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"Actinated Sludge Process in Sewage Disposal" was the subject of a valuable paper by Dr. G. G. Naismith, and an interesting discussion followed a paper on "The Toronto Filtration Plant" by James Milne, as to relative costs of operation of slow sand and drifting sand filters. These papers were presented at the annual meeting of the Engineering Institute of Canada on Feb. 2nd.

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Toronto will have a milk campaign early in May. This is being arranged by the Child Welfare Council of the city. The C. P. H. A. is assisting in every way to make a real success of this effort and to stimulate the holding of similar campaigns in other cities. Particulars may be obtained from the Association Office, 206 Bloor Street West, Toronto.



# Editorial

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## A Unique Experiment

A SOMEWHAT unique plan of co-operation between a voluntary organization and a Government is that presented in the arrangement whereby the National Council for Combating Venereal Diseases in Great Britain undertakes to do propaganda work for the Ministry of Health. A scheme whereby a voluntary organization succeeds in doing work necessary for the success of government schemes and at the same time retains the essential initiative characteristic and necessary in a voluntary body is one worthy of careful examination in Canada. Voluntary bodies dealing with specific problems generally render valuable aid in the forward march of public health because they are composed of persons who are really interested in a particular problem for its own sake. A well organized voluntary body generally means rapid progress, more rapid than could be achieved by any governmental machine for reasons that are fairly obvious.

At the same time voluntary organizations in the past have nearly always been hampered by lack of funds. The way of the reformer—and voluntary organizations are reformers and pioneers—in this respect has commonly been hard. In Great Britain the pathway of the National Council for Combating Venereal Diseases has been made smooth by the Government—with the result that Government plans for the control of Venereal Diseases have progressed much more rapidly than they otherwise would.

The National Council for Combating Venereal Diseases virtually acts as a Government agent for the disbursement of funds locally for propaganda work. Money is only spent for propaganda with the joint consent of the municipality or county involved and the Ministry of Health. Where money is spent locally on propaganda under this joint scheme there is a reimbursement to the extent of seventy-five per cent on the part of the Ministry of Health. It is understood that since this plan has been evolved and during its operation over a period of years the happiest relations have existed between the Government and the National Council. At the same time the National Council has retained its voluntary character, has continued to enlist public sympathy in its problem, collected public

funds and undertaken original investigations of a valuable character.

Such a relation between the Government and voluntary organizations would seem to be ideal in that it tends to prevent the voluntary organization from getting out of hand and at the same time gives the Government the opportunity of enlisting public support in a unique and thoroughgoing manner. It has been suggested that a similar relationship might well be established in Canada between the various provincial branches of the Canadian National Council for Combating Venereal Diseases and the Provincial Governments and already a number of Provincial Health Officers have expressed themselves as in favour of such a development. The Venereal Diseases problem is a tremendously complicated one. Extensive propaganda work is necessary and also many new developments in the direction of education of both parents and children, recreation, rehabilitation of sex offenders, organization of clinics and of social investigation in connection with clinics, jails, police courts and reformatories, in addition to a great deal of medical investigation. If progress in these various directions is to be rapid it will only be as the result of organizing the various forces at work. The provincial and municipal committees of the Canadian National Council for Combating Venereal Diseases provide the opportunity for getting the forces together. They are all, however, confronted with the problem of finance. Until some money is provided paid secretaries and offices are out of the question. With this nucleus provided as in Great Britain there is no doubt that tremendously increased activities would be evident at once. It is to be hoped that the matter will be given careful consideration in the various provinces and that some measures of financial support on the part of provincial governments and possibly municipalities will result.

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## The Coming Convention, Toronto, May 16, 17, 18, 1921

THE Executive Committee after careful consideration and consultation with the members of the Executive Council have decided to call the 10th Annual Convention of the Association, on May 16th, in Toronto. This step was taken believing that it was unwise to choose a convention city in the extreme East this year, since last year's meeting was held in the extreme West. The



choice of Toronto was made, because the Ontario Health Officers' Association of whom a very large number are members of the C.P.H.A., had already chosen Toronto for their annual meeting. It is the policy of the Association to unite with the Health Officers' Association in holding the annual convention when such an organization exists in a province. In 1917 a Joint Meeting was held in Quebec with the Quebec Health Officers, and in 1919 with the Ontario Health Officers in Toronto.

A Committee was appointed by the Executive to meet with the Ontario Health Officers' Association and plans were discussed for a joint meeting. Invitations were then extended to the Canadian Association for Prevention of Tuberculosis, Canadian National Council for Combatting Venereal Diseases, and the Canadian National Committee for Mental Hygiene, to join in planning for a convention of special importance. The invitation has already been accepted by the two former association, and the programme is being drafted.

The programme committee has decided to make a radical departure from the usual type of public health convention. It is planned to devote two, or possibly three of the sessions to the study at first hand of the work of modern public health clinics. The clinics will include Child Welfare, Ante-natal, Malnutrition, Venereal Disease, Tuberculosis, and Psychiatric, and a time-table for these has been carefully arranged so that those attending the convention can see the clinics actually being carried on. In order that the different clinics may be of most value, special material will be presented so that the methods in use may be clearly demonstrated. Modern laboratory methods will be demonstrated by the Laboratory Section in such a way that those in attendance who are not conversant with laboratory methods may see the technique and the various steps in practical work. Visits are planned to the Filtration Plant, Sewage Disposal Works, and to other places of interest. Several speakers are being invited, whose presence should be of special interest. This does not mean, however, that opportunity will not be given for presentation of papers and discussions. Papers for Section meetings should not occupy more than 15 minutes, and should be addressed to the chairman of the section. These include:

*Mental Hygiene.*—Col. C. K. Russel, 386 Sherbrooke Street W., Montreal.

*Social Hygiene.*—Rev. Arch. Deacon Symonds, Christ Church Cathedral, Montreal.

*Child Hygiene*.—Dr. M. M. Lindsay, 52 McGill College Avenue, Montreal, P.Q.

*Laboratory Workers*.—Dr. R. H. Mullin, University of British Columbia, Vancouver, B.C.

While papers which are to be presented at the various section meetings are to be addressed to the chairman of the section, papers for the general session should be addressed to Dr. R. D. Defries, General Secretary, 206 Bloor Street West, Toronto.

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# United States Public Health Service

## HOW DUSTY IS YOUR PLANT?

All industrial plants are dusty. But how dusty is the air in any particular plant? Knowledge as to the degree and composition of such dust is important, for certain amounts and sorts of air dust seriously affect the lungs and predispose those who breathe them to tuberculosis and other diseases.

Dr. O. M. Spencer, of the U. S. Public Health Service, discusses the matter in a recent report of the Service. He shows that neither the fact that the exhaust pipes, etc., required by law appear to be properly functioning nor the use of wet instead of dry processes in grinding, polishing, and the like make it at all certain that the dustiness in a given plant is what it should theoretically be. He finds that many exhaust pipes do not in fact exhaust as they are supposed to do; and that under certain conditions some wet processes create much more dust than dry ones. Only actual "dust counts" at the plane of the work show the real dustiness of the air that the workmen must breathe; and such counts should be made periodically to check the theoretical conditions.

To determine how unhealthful the dustiness of any particular plant process may be, the composition of its dust should be ascertained and its effects interpreted by standard tables, which Dr. Spencer urges should be worked out for the various industries. Different industrial processes produce dusts which differ greatly in injurious properties.

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## HEALTH HAZARDS IN LUMBERING REGIONS.

Health problems in lumbering regions are being investigated by the U. S. Public Health Service as part of a general study into occupational diseases and industrial hygiene undertaken in Florida at the request of the State Board of Health. The work has not yet gone far enough to permit important deductions to be drawn; but it seems to show that the problems are not essentially different from those obtaining in other lumbering districts of the South and,

indeed, in other parts of the country, except in that they show a high incidence of malaria and hookworm diseases. The results should be generally interesting.

Dr. J. A. Turner, of the Public Health Service, who was sent to Florida with instructions to ascertain the special needs of the workers and to make recommendations to the State Board of Health as to the best ways of meeting them, has first taken up the lumbering industry and has found that this involves two sorts of problems, the first pertaining to the actual working conditions, and the second to the reactions of the more or less transitory lumbering population and of the permanent residents on each other.

Study of working conditions involves investigations of processes of production, medical and surgical care, sanitation of camps, and food supply; and study of reactions includes investigations into the economic condition of the residents, prevalence of transmissible diseases, malaria, and venereal infection and possibilities of soil pollution.

The object of the work is, of course, to reduce sickness, accidents, absenteeism, and labor turnover; and thereby to obtain increased efficiency and greater economic prosperity for both workers and employers.

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## Fundamental Facts in Organization

BY A. D. BLACKADER, M.A., M.D.,

Professor of Pediatrics, McGill University.

Read before the Child Welfare Conference, Ottawa, October 18th, 1920.

**M**Y first duty is to congratulate all those interested in Canadian Child Welfare on the fact that we meet to-day under the auspices of our new Dominion Department of Health, at the head of which has been placed Colonel Amyot, whose services before the War, and afterwards at the Front, inspire us all with confidence in his ability, energy, and desire to further all thoughtful efforts for the general good.

A National Department of Health has long been a consummation devoutly wished for by every member of the medical profession, and by the Canadian Public Health Association as a body. We are all thankful that it is at last inaugurated.

We also congratulate the Department and ourselves, that Dr. Helen MacMurchy has been persuaded to accept the appointment as chief of that special division of health work which has to deal with Child Welfare. Dr. MacMurchy has been well known for many years as a leader in all efforts to educate the mother and to secure and the growing child. All Canadians who are interested in Child Welfare gladly recognize in her a chief for this Department who will stimulate all forms of effort and maintain good will and harmonious co-operation amongst the many local and provincial societies which are working for the better development of infancy and childhood.

The importance of child welfare has only recently been recognized by Governments and the general public. The appalling mortality in the recent terrible war has forced every nation to take thought on the problem of how to save its children. For a few previous decades the heavy death rate of the first years of life

had attracted the attention of statisticians, statesmen, and the more thoughtful minds in the medical profession, and much earnest work and study has been given to its many problems by physicians and philanthropic societies. As a result, the high death rate has been greatly reduced. It is still, however, unnecessarily high. Much remains to be accomplished. Not only must the percentage of infant mortality be still greatly diminished, but the condition of those who survive must be radically improved and their development during childhood carefully considered. To emphasize the importance of this conservation I quote from Sir Leslie MacKenzie of the Local Government Board of Scotland, who in a recent report writes as follows: "The total number of deaths of children under five years of age in Scotland between the years 1911 and 1916 was 106,122. More than five army divisions wiped out in five years. But these are only the dead. The damaged, the disabled, the weaklings cannot be counted. They are many times more than the dead, but how many times more cannot be told. Statistics give us facts regarding the dead, but statistics regarding the damaged, the crippled and the defective are very inadequate.

This high percentage of weaklings and defectives was forcibly brought into the limelight of the public consciousness by the reports of the medical examiners of both conscripts and volunteers for Army Service during the years of the War, not only in our own country, but also in the country of every belligerent. The numbers varied for town and country, but speaking for our own country about 20% of those examined were rejected as physically unfit for any service and 20% more for the strenuous duties of camp life. In other words, about 1-5 of our young men proved to be physical failures imperfectly able to stand the strain of life, and another fifth had some serious handicap. The notable fact for us is that the greatest percentage of the crippling defects met with might have been prevented had proper precautions been taken in early life. The cry of our country is for strong men. Every child has a right to be as healthy and perfect as present knowledge can make him. The country in which he is born should see that he obtains his birth-right.

Such facts have aroused a previously lethargic public opinion. Our legislators and our public-spirited men and women are now convinced of the urgency of the need for greatly increased effort to stem this national waste of life and vigor. The present is, therefore, a peculiarly auspicious time for a national conference at which all those who take an active, earnest interest in the development



and welfare of the child may take thought and decide on the best measures for further development and for the more perfect co-ordination of all child welfare work in Canada.

We have throughout the country many local and provincial associations. It is our hope that under the guidance of Dr. Mac-Murphy and as the result of this Conference the work of each may be strengthened and stimulated, and perhaps gradually defined so as to prevent unnecessary over-lapping. In cities or districts where such associations have not yet been established efforts under the direction of our new department will, we trust, be made to initiate work along some definite pre-arranged plan.

Our field of work is a broad one and there is room for all. To assure the best results we must enlist the assistance of all forces in the community; public officials, ministers and priests of every denomination, physicians, dentists, architects, social workers, health visitors, and of every club or society that has as one of its aims the good of the child, and its healthy development, physically, mentally and morally. In many matters we may not all see eye to eye. Where there are many men, there are many minds, is an old Roman proverb which has as much force to-day as when it was first written, and holds as true of women as of men. Differences and difficulties are sure to arise among various groups of workers when they attack the same problem from different points of view. Few of the problems of infancy and childhood are as simple as at first sight they may appear to be. It is desirable therefore, in addition to an annual Dominion Conference that local and provincial conferences should be held at regular intervals for discussion and mutual education in regard to the local conditions and problems which may arise from time to time.

Speaking generally we may say that to make the sick child well is the work of doctor and nurse, but to keep healthy those children who are not sick, and to secure their perfect development is the aim to which we should direct all our mutual forces. Prevention is our motto. Doctors are powerless to undo all, or even most of the ill effects of disease in children, but with the assistance of a careful mother in the home much may be done to prevent disease with its damaging effects. All mothers require education in the details of infant feeding and hygiene, and in the care of the developing child, and to impart this knowledge we must secure their confidence in our sincerity and the value of our advice. Not infrequently efforts must be directed to the restoration of family life in its dignity and integrity; an integrity in many localities which has

been sadly encroached upon by the bitter necessities of ill-paid industrial life. All this requires tact as well as knowledge. Sir Arthur Newsholme writes: "one of the valuable by-products of the calamitous world-war is a restoration of the ideal status of motherhood on which depends the well-being and happiness of the future of mankind."

To enable child welfare work to be carried on with advantage, detailed statistics are of the greatest importance. A new census is, we understand, under consideration. We trust that this department will arrange to secure, as completely as possible, details regarding not only the birth-rate and death-rate during the various periods of infancy and childhood, but also, as far as may be practicable, the conditions under which infants and children live and develop in the different cities and provinces of Canada. Such details would prove extremely valuable not only for guidance in our work, but also for stimulation to further effort.

Three conditions are necessary for the proper development of the growing infant and young child. *First*, and most important, is proper food suitable to the wants and digestive capacity of the child.

The food should be sufficient in amount, should be well balanced in the nutritive quality of its ingredients, and should be given at regular intervals to secure its perfect digestion, proper assimilation and necessary elimination.

*Second*, and scarcely less important, are fresh air and sunlight for the waking, playing and sleeping child. The *third* requisite is rest for wearied organs, avoidance of undue excitement, and a sufficient amount of quiet undisturbed sleep to permit repair to the nervous system. I do not under-estimate eugenics and the value of progressive education.

Our work deals with three periods of life, which, in my opinion, it is desirable to keep fairly well defined in our discussions. The first period is that of infancy. In this must be included the pre-natal stage and all problems which have to deal with infant life, its nutrition, growth and development, and the causes leading to the high death-rate of this period.

The second period embraces childhood from the end of dentition until the sixth or seventh year, when the child enters school. It is the period in which, owing to defective care and guidance, many of the crippling ailments of the child become manifest and do most harm. It is an age demanding constant care regarding the general nutrition of the child, and regular inspection of the teeth, eyes and



ears, tonsils and adenoids, and the posture and gait. The third is that of school life; a period which pre-eminently demands oversight by the State. Every child should be regularly and thoroughly examined by a trained physician to detect the presence of any condition interfering with continued development. The character of the dietary, the length of school hours, and the amount of fresh air and exercise, all call for careful consideration.

During these periods the value of regular inspection by educated and trained investigators, by physicians at longer intervals, by trained nurses or health visitors at short intervals cannot be over-estimated. A centre for short training or education courses should be established in every large city where all those who desire to do practical work in child welfare work should have special instruction in the important details of infant-feeding and hygiene, the dietary and care of children of older age, and the more important symptoms of disease in young life. All children should be weighed and measured at regular intervals and permanent records should be kept for future reference.

The Victorian Order of Nurses has given us a splendid example of what can be accomplished in a special line of work by a selected and well-trained band of conscientious and enthusiastic nurses. I should like to see a similar order of child welfare workers trained specially for work among children to make rounds in every district in Canada.

The greater portion of the ills of early life could be prevented if mothers could be educated to work under the directions of such trained nurses, associated with frequent subsequent visitation, under the supervision of district physicians who have specially studied infant and child life, and who have love and sympathy for the developing child.

There are many other matters of importance to which, did time permit, I should like to make reference. Many of them, however, will be presented to your attention in detail by persons more qualified than myself to discuss them. One matter, I should like to urge action upon, and that is the necessity of establishing in every province schools or institutions for the mentally defective. To secure these some endowment will be necessary, partly from the general funds of the Dominion, partly from the funds of the province, and partly from the philanthropic public. With proper training a large proportion of these mentally wanting could become self-supporting, and thus cease to be a burden, and sometimes even a menace, to those around them.

The child in industry is also a subject which demands constant oversight by the Government. Our laws are now fairly strict, but with any laxness in supervision child life will suffer. You all remember the pathetic appeal of Mrs. Elizabeth Barrett Browning:

Do you hear the children weeping, Oh! my brothers,  
 Ere the sorrow comes with years?  
 They are leaning their young heads against their mothers,  
 And *that* cannot stop their tears.

\* \* \* \* \*

Do you question the young children in their sorrow,  
 Why their tears are falling so?

\* \* \* \* \*

They look up with their pale and sunken faces  
 And their look is dread to see;  
 For they mind you of their angels in high places,  
 With eyes turned on Deity.

How long they say, how long, O cruel nation,  
 Will you stand to move the world on a child's heart;  
 Stifle down with a mailed heel its palpitation,  
 And tread onward to your throne amid the mart?  
 Our blood splashes upward, O gold heaper,  
 And the purple shows your path;  
 But the child's sob in the silence curses deeper  
 Than the strong man in his wrath.





# The Place of Occupational Therapy in Mental Hygiene

NORMAN L. BURNETTE,

Canadian National Committee for Mental Hygiene.

**W**ORK as an antidote for the ills that afflict the mind is no new thing. Consciously, and unconsciously, patient and physician alike, have recorded throughout the ages, the peace and restored vigor, which is to be found in a life filled with purposeful endeavour.

The needs of our war disabled emphasized the beneficial results of occupational treatment and from the lessons taught can be deduced much that is pertinent to certain questions of the day.

Not the least of these is the value of occupation in the treatment of the defective, the mentally sick and the insane.

There are to be found in all asylums many patients who within the safe haven of institutional care are able to perform much useful work. The satisfactory service which they give in laundry, mending room and repair shop, or while working adjacent farm lands, is indicative of the line of treatment which should be followed in these cases.

To quote Dr. Charles F. Read, Supt. of Chicago State Hospital: "Occupy these people, give them back a definite interest, even though it be but a petty one compared with what they have lost . . . what has been thrown overboard in the storm of the acute psychoses cannot be entirely replaced, but something can be salvaged, and final shipwreck avoided in many instances."

This last sentence is the most important note struck from the viewpoint of mental hygiene, because it lifts the whole matter of occupation out of the plane of "Work for institutional use only" into the nobler field of "Any occupation so long as the patient benefits."

Not only are there many patients who are temperamentally unsuited to benefit by participation in the ordinary work of the institution, but even those who are so employed, will do better if routine house or farm work could be varied by a change to something entirely different.

The Occupational Therapy so successfully used in the Canadian Military Hospitals, proved, that given a wide range of activities, it

is possible to treat by this means, practically all the patients in an institution. Cures are thereby accelerated and the problem of the incurable is lessened to the extent that their lives are brightened, they have less time and less inclination to make trouble for themselves and the staff, and the dead loss which their confinement represents to society is in many cases compensated for by the economic value of their work.

In passing it should be noted that all this is possible, only, if there is employed a sufficiently numerous and thoroughly trained occupational staff capable of fitting work to the varied needs and interests of the individual patient.

Experience has shown the value of the handicrafts as a medium for supplying a wide range of interests. The results from this class of work are not accidental, but are founded on sound psychological laws. Many of us know the health and happiness that comes through having a hobby. Even if hard work is entailed, it is a change from our usual labor. The article fashioned by our own hands holds for us a value far beyond anything which we might pay for the same thing factory made. We have satisfied the creative instinct existent in nearly all of us and which, since the mud pie period of happy childhood, has been repressed and dammed back, by the exigencies of modern industrialism. To realize how this dormant instinct can be fanned into activity, so that it will restore to health the tottering mind, one has only to see and marvel at the beautiful examples of bookbinding, pottery, basketry, weaving, wood and metal work done by those who have been diagnosed as unable to function in ordinary surroundings.

The Medical Director of the Canadian National Committee for Mental Hygiene, speaking of the craft work at the Military Hospital at Cobourg, Ontario, said: "The results are inspiring. In the show rooms are to be found examples that would be worthy of artisans of long training. These men are not artisans though, and are in the majority of instances simply mentally handicapped persons who are being wooed back to normal life by individual care."

It is obvious that the mind which is directing the hand in such activity must be so fully occupied with its task that there is left no room for those delusions and fantasies which prevent adjustment with the world of reality. The concentration brought into play by Occupational Therapy does more than purge the attention of distributing ideas for the time being. It recreates ability to



focus the attention at will, just as physical exercise will harden up flabby muscles.

This has been observed time after time again with patients suffering from temporary nervous conditions due to war shock. Men thrown into state bordering on hysteria by the sound of a door slamming, were unaffected by noise of their own making, because their interests were engaged by the task, and they eventually became oblivious to outside disturbances. At Whitby Military Convalescent Hospital the men of an art metal class, were, in the later stages of their recovery, deliberately put to work in a shop, next to where gas engines were being tested.

Turning from the question of mental disease to allied problems we find a direct use for Occupational Therapy in the education of the feeble minded. Dr. Devlin, Med. Supt. of St. Jean de Dieu Hospital, Montreal, in a thoughtful article contributed to the Canadian Journal of Mental Hygiene points out how Sequin's methods of education for idiots was based on "Physiological training of the senses and faculties of exercising and developing the powers of attention, perception and judgment by teaching the quality and properties of concrete objects instead of expecting the feeble minded child to absorb ready made knowledge from books; of progressively training the eye, the hand, the ear."

Here, as Dr. Devlin points out, was laid the basis of Occupational Therapy in one of its most scientific aspects. By arousing interest we stimulated mental activity and as the various thought processes are brought into play it becomes possible to guide, direct, and educate them into proper use.

But the feeble minded are not confined to institutional life only. Their presence runs like a scarlet thread through all the warp and woof of our social structure. Besides those of school age who need special methods of education there are many cases of maladjustment, attributable to mental abnormality, which do not of necessity call for custodial care. The problem is to find facilities for oversight and study of capabilities.

Akin to these cases are those who after treatment in hospital are considered fit again to pass under their own control, but for whom it is unwise or impossible to find immediate employment in the open labor market. To allow these people to deteriorate through idleness is manifestly wrong. The solution would appear to be special Out-Patient Clinical Workshops, providing occupation which would serve a four-fold purpose. Diagnostic, arrest of condition through the therapeutics of occupation, vocational guidance after

an evaluation of industrial fitness, and in the last resort, productive work to the limit of capability for those who could not carry on as wage earners elsewhere.

The need for developing occupational therapy in mental hospitals is fully realized by enlightened Superintendents. Public opinion must insure for them the necessary measure of financial support. Money thus spent is exceedingly well spent. At the same time unless extra-institutional provision is made it is hard to see what can be done to arrest the tide that at present flows steadily asylumward.

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# Statistics and Publicity in Child Welfare Work\*

BY CHAS. A. HODGETTS, M.D., D.P.H.

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As the life history of the presentation of this subject is limited to just six hundred seconds, it will be at once realized that elaboration of thought has been officially electrocuted, and as careful thought is an essential factor for the intelligent discussion of statistical facts, I can simply, like a boy, blow bubbles in the air.

However, mine is but a simple story: it lacks all those elements of romance, those touches of eastern condition which are so prominently portrayed to-day by individuals, societies and associations, who by their subtlety and insidious enthusiasm for things they have not seen, but heard about, gather up the golden shekels for those who are not so fortunate as to live in Canada. It relates only to those of our own kith and kin—those of infant years—so many of whom through parental ignorance and neglect never pass the first of life's milestones.

The stories of the suffering and deaths of children in many parts of Europe are pitiful and heart rending and should call forth a tangible expression of sympathy.

But, there is a big "but" in it too; what of the waste of life, the suffering in the homes and the maternal grief and pain of those who can rightly claim to be "our sisters." The national waste of the lives of our Canadian babies which goes on year after year and has been operating for half a century, is surely deserving, if not of our charity, certainly of our assistance.

One cannot picture to you, Canadian children wandering like wild animals through our native woods, nor speak of eleven million fatherless children suffering the horrors and pangs of starvation and poverty. I would like you to pause and conjure up in your minds the multiplied sufferings of the past five decades during which period hundreds of thousands of lives of Canadian children have been wantonly sacrificed on the altar of ignorance: and then think and ponder over this serious fact, that the waste of this, the greatest of all our national assets, continues day after day.

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\*An address delivered before Dominion Conference on Child Welfare, at Ottawa, on November 19th and 20th, 1920.

Believe me, if the true story of thousands of Canadian homes could be brought to public notice with the same enthusiasm and publicity, the same artistic touch of pathos and lurid colouring, there would be less room for foreign interest and more domestic action.

In the eight years 1911-1918, the official statistics show, although they are incomplete, that the population of Canada was increased by 1,648,069 births. The report before me contains, unfortunately, no reference to deaths, so deductions have had to be made, and it is estimated that during these eight years there were 263,090 deaths.

Statistics are always dry reading, but the figures regarding infant mortality are made up from "Baby Units," and so far as health statistics are concerned, they each carry with them a story, and that story is one of the home life and the home of each of the "Units" reported on.

If our homes were natural they, like the lily, would be beautiful, for in this world every prospect pleases and only man and his environment are vile. But all homes do not possess the beauty of the lily which luxuriates in the aborescent shade of the valley and spreads its perfume around.

These infants are all of our own flesh and blood—come of the right stock and are our chief national asset, just the population we require to make possible further development of our national resources.

Without in any way desiring to reflect on Ontario rural communities as compared with those in other parts of the Dominion, but entirely from the fact that the figures are more readily obtainable from the report of the Registrar General of that Province for the illustration, I would call your attention to one particular phase of the work which the statistics present.

During the decade 1908-1917 inclusive, the death rate per 1,000 births in the rural municipalities of Ontario fell from 109 to 83, yet in the united counties of Prescott and Russell, with a population of 51,010, there were 17,667 births and 2,713 infant deaths, being an average of 153 deaths per 1,000 births, the total infant deaths being 38 per cent. of the total number of deaths at all ages for the same period.

In further comparison, during the same year (1917), in the eight counties (Table 13), with three and a half times the population and with a registration of two and a half times the number of births, there were the same number of deaths.



In 14 towns (Table B), with nearly twice the population and one and a half times the number of births, the total number of deaths was the same.

In 8 cities (Table C), of more than twice the population and one and one half times the number of births, the deaths were the same.

What is wrong? Is it the failure on the part of parents to comply with the law, or have we to delve further into the question and ascertain the true facts: or perhaps all the deaths have not been reported. If so, all the greater the necessity for action.

Upon entering the 2,713 homes in Prescott and Russell counties to ascertain the cause of death, we may learn a little of the truth. I say a little, for over one half has been committed to the "statistical dump," the causes of death being classified under "Congenital Debility," which if we analyse further really conveys no intelligent idea as to the true cause of death. It may be from maternal ignorance, from criminal neglect or a hundred or more other causes that these deaths are due, for the medical returns as to cause of death are altogether too vague. Many of these lives were lost, we believe, from preventable causes. It is just the information we require for intelligent action which we do not get, and only education of the medical profession will secure this.

Of another group consisting of 31 per cent. of the whole, the majority of deaths were preventable. The babies suffered from digestive troubles, communicable diseases and diseases of the respiratory system, and of the total number, 18 per cent. was due to non-preventable causes.

It is just the picture concealed under the fact thus very briefly outlined which should be written up and in the same lurid manner referred to in the early part of the paper which would alone direct the attention of the Canadian public to the urgent need for work at home and in the homes of Canada, particularly in the rural districts.

The statistics are before you, and this particular field presents opportunities for intensive work, and I may add, there are others scattered over the wide Dominion that you would hear nothing of if it were not for the statistical reports. Meagre as the information as to causes of death may be and the details wanting, yet even from the "dumpheap" something of value may be recovered.

It has been said that for the proper study of infant mortality, the first necessity is to have proper and reliable records of the registration of all births and deaths. With this statement I differ, for the records of deaths do not afford sufficient information.

They are valuable as far as they go, but they tell us nothing of the morbidity which goes on, entailing much suffering and often followed, not by death, but by a life of infirmity of partial or total disability, all of which means physical inefficiency.

For intelligent action we require statistics of the highest character. What we have is not sufficient. Give me the morbidity returns and a statement of all the amenities prevailing in a community and I will be better able to direct and suggest the work to be carried on which will effectively cope with the waste of child life. It must be obtained and must come from the home, and primarily should come through the local authorities and not by voluntary organization.

To arrive at any decision as to the most effectual measures to be adopted in any particular province or community, it is essential to know the causes of morbidity and mortality. These are numerous and act in different ways, and often several causes combine to bring about a high rate. Whatever they are, they reflect the general social condition of the people. They may be classed under two heads, GENERAL and SPECIAL causes.

Amongst the GENERAL causes stand out prominently:

1. Ignorance as to the prenatal period.
2. Ignorance as to proper feeding.
3. Overcrowding.
4. Defective sanitation.
5. Poverty.
6. Alcohol.
7. Heredity diseases.

All of these causes affect the infant even should it survive the first year of life, thereby militating against the physical efficiency of the race.

The SPECIAL causes may be sub-divided into:

1. Preventable.
2. Partially preventable.
3. Non-preventable.

They come into play at certain times and under certain circumstances and often become merged with the result that infant life becomes submerged.

The chief PREVENTABLE causes are:

1. Diarrhoea (responsible for 1-5 of the deaths.)
2. Dyspepsia and rickets (breastfed infants almost immune.)
3. Measles and whooping cough.
4. Accidents and neglect.



In the second division, **PARTIALLY PREVENTABLE**, may be mentioned:

1. Malnutrition.
2. Bronchitis.
3. Pneumonia.
4. Syphilis.

These maladies account for a considerable proportion of infant deaths, but the fallacy of the returns makes accuracy in estimation almost impossible.

The third group known as **NON-PREVENTABLE** consists of those due to:

1. Congenital malformation.
2. Premature births.

Some of the deaths reported in this group could, no doubt, be prevented by the education of women as to the exercise of greater care during the prenatal period.

This brings me to the point I wish to emphasize, viz., that for effective work, to insure correct statistics and to give effect to publicity which is really "education", the **CENTRE** for work is to be found in the community, the municipal unit, for without live local centres which are the battle fields in which the warfare is to be carried on and first aid to be administered, it will be futile to hope for success from a central bureau, be it Municipal, Provincial or Dominion. Success comes from within, and the work must centre in each Canadian home and radiate therefrom until it permeates the community.

The duty of bringing up children does not belong to the state, but rather to the mothers, and whatever we do we must not be too ready to relieve them of their responsibility. The state can, however, do much to see that the rights of the children are not ignored and that the mothers have the opportunity given them of learning how best to rear their children.

It is by proper and judicious publicity that a state can, in my opinion, best assist in the education of the women of Canada, but the centres of activity must be created and operated in every municipality and community and the municipal authorities must be stimulated into action.

"**CONSERVE WHAT WE HAVE**" is a world-wide utterance to-day. Make it a live issue by at once instituting a general system for the care of motherhood and the prevention of this wanton waste of infant life.

## PRESCOTT AND RUSSELL.

| Year.        | All causes<br>and ages. | Infants | Births. |
|--------------|-------------------------|---------|---------|
| 1908 .....   | 739                     | 313     | 1,881   |
| 1909 .....   | 764                     | 337     | 1,760   |
| 1910 .....   | 692                     | 317     | 1,842   |
| 1911 .....   | 771                     | 324     | 1,767   |
| 1912 .....   | 613                     | 219     | 1,659   |
| 1913 .....   | 697                     | 242     | 1,860   |
| 1914 .....   | 699                     | 223     | 1,715   |
| 1915 .....   | 741                     | 282     | 1,770   |
| 1916 .....   | 754                     | 240     | 1,692   |
| 1917 .....   | 658                     | 216     | 1,721   |
| Totals ..... | 7,128                   | 2,713   | 17,667  |

TABLE NO. 13.

| Counties.               | Population | Births. | Infant Deaths. |
|-------------------------|------------|---------|----------------|
| Dufferin .....          | 15,920     | 311     | 21             |
| Elgin .....             | 29,610     | 753     | 29             |
| Frontenac .....         | 23,440     | 989     | 27             |
| Haldimand .....         | 21,110     | 411     | 31             |
| Lennox and Addington... | 19,580     | 323     | 21             |
| Peel .....              | 22,870     | 390     | 23             |
| Perth .....             | 35,360     | 960     | 43             |
| Prince Edward .....     | 16,330     | 319     | 21             |
| Totals .....            | 184,220    | 4,456   | 216 48 per M.  |

TABLE "B."

| Towns.              | Population. | Births. | Deaths. |
|---------------------|-------------|---------|---------|
| Barrie .....        | 6,870       | 144     | 21      |
| Collingwood .....   | 6,540       | 190     | 16      |
| Cornwall .....      | 7,310       | 204     | 25      |
| Ingersoll .....     | 5,360       | 141     | 6       |
| Kenora .....        | 6,430       | 151     | 12      |
| Lindsay .....       | 7,280       | 182     | 11      |
| Orillia .....       | 9,340       | 286     | 11      |
| Owen Sound .....    | 11,650      | 312     | 19      |
| Parry Sound .....   | 6,290       | 203     | 20      |
| Smith's Falls ..... | 6,500       | 176     | 22      |



| Cities.           | Population. | Births. | Deaths.       | ... |
|-------------------|-------------|---------|---------------|-----|
| Steelton .....    | 5,485       | 167     | 19            |     |
| Thorold .....     | 4,550       | 94      | 10            |     |
| Walkerville ..... | 5,270       | 132     | 7             |     |
| Welland .....     | 8,200       | 224     | 17            |     |
| Totals .....      | 97,075      | 2,606   | 216 82 per M. |     |

TABLE "C."

|                     |         |       |               |  |
|---------------------|---------|-------|---------------|--|
| Belleville .....    | 11,430  | 208   | 15            |  |
| Chatham .....       | 14,350  | 267   | 38            |  |
| Guelph .....        | 16,020  | 413   | 34            |  |
| Kitchener .....     | 19,200  | 494   | 34            |  |
| Niagara Falls ..... | 12,030  | 289   | 21            |  |
| Stratford .....     | 15,450  | 355   | 26            |  |
| Sarnia .....        | 12,960  | 271   | 21            |  |
| St. Thomas .....    | 15,880  | 334   | 27            |  |
| Totals .....        | 117,329 | 2,611 | 216 82 per M. |  |

## Fighting Disease

A Bulletin recently issued by the Canadian National Council for Combating Venereal Diseases.

**B** EING a report of a conversation between a well-known Health Officer and Mr. John Smith, an average citizen who should be helping in the work of the Canadian National Council for Combating Venereal Diseases.

"Look here, doctor. What are these Venereal Diseases we hear so much about? Are they as serious as people say?"

"Yes, John, they are serious. What are they? Well, there are two major Venereal Diseases, Gonorrhoea and Syphilis."

"Tell me about them. What causes them?"

"Medically speaking, Gonorrhoea is caused by a germ called the gonococcus. Syphilis is caused by a small organism which under the high power microscope looks like a tiny worm. It is called the spiroketa pallida. The two diseases are contagious and are passed from one person to another by intimate personal contact. Socially speaking, I might say they are caused by bad social conditions."

"Wait a minute, doctor. Don't tell me all at once. Tell me first of all how the two diseases differ. Are they equally serious?"

"Gonorrhoea is a local infection spreading generally along mucous membranes. Syphilis is a blood infection beginning as a local sore. They both produce serious results. I think the one is just as serious as the other, especially when we consider their ultimate effect on the community."

"They must be pretty prevalent then, doctor?"

"Are they very prevalent? The Report of the British Royal Commission on Venereal Diseases, a commission appointed by the British Government, brought in in 1916 was to the effect that ten per cent. of the population of all great cities in the United Kingdom were suffering from Syphilis and that the amount of Gonorrhoea was considerably in excess of this. An American estimate is to the effect that eight per cent. of the population on this Continent is affected with Syphilis."

"But are such statistics applicable to Canada?"

"Owing to the fact that Venereal Diseases have only recently been reportable one can only estimate. In Toronto General Hospital in 1917, it was found that in a period of three months, twelve per cent. of the patients were definitely suffering from Syphilis. Similar tests done in Montreal General Hospital proved that twenty-



six per cent. of the patients in that hospital had Syphilis. Undoubtedly the cases of untreated Syphilis can be numbered by the thousand."

"Are such cases under treatment?"

"Some are. Unfortunately many infected people do not realize the seriousness of their disease and as a result remain untreated or do not complete the treatment they have commenced. Therefore, there are always a large number of infected and infective persons at large."

"What is the distribution of Venereal Diseases?"

"They are very widespread. They are found in all sections of the country although they are more prevalent in the thickly populated cities."

"What facilities for treatment are there?"

"Private physicians, of course, are available. The Dominion and Provincial Governments, and some municipalities, however, recognizing the fact that many people may be unable to pay have voted large sums of money to establish clinics for the treatment of these diseases. There is now no excuse for people in the populated centres to neglect treatment."

"How long must treatment be kept up?"

"That depends. In both Syphilis and Gonorrhoea early treatment means a shorter course of treatment. Neglected Syphilis may take many years to cure. Gonorrhoea and its results are also very serious if careful treatment is not instituted at once."

"But are Venereal Diseases as serious as some people say? Aren't they exaggerating?"

"Well, the late Sir William Osler made a statement to the effect that Syphilis as a killing disease ranks first among the infectious. This means that it outranks those two other great killing diseases, pneumonia and tuberculosis. It is also a great cause of infant mortality. And these statements leave Gonorrhoea out of account altogether."

"In addition to this Venereal Diseases are by far the greatest cause of sterility both in the male and the female and the greatest cause of abortions and miscarriages. They cut down the birth-rate tremendously."

"Well, doctor, these diseases must be pretty expensive to the country."

"Of course, they are. For instance, in one Canadian asylum about a quarter of the male admissions in a year are due to general paresis. This form of insanity is caused by Syphilis. It is always fatal and incurable.

Again, in 1,000 cases of blindness in an Institute for the Blind, between 56 and 58 per cent. of the cases were found to be due to Venereal Disease.

These diseases are said to cause about half of the operations on women for ailments peculiar to women. And these are only a few of their serious results. One cannot seriously estimate how great the cost of it all is."

Well, doctor, of course, I can see that the direct expense to the community in the upkeep of insane asylums, institutions for the blind, hospitals and all the rest of it is very great. I suppose that the indirect cost is great too, isn't it?"

"Yes, indeed. Imagine, for instance, the case of a married man carried off by general paralysis of the insane, at the age of forty. Suppose he leaves behind a wife and small children. His wife may be infected herself. The children may be infected too. All of these dependents are likely to be inefficient because of their condition. It has been found that such families too frequently may even become delinquents and then the community pays again in the police court, the reformatory and the jail. Can we ever estimate just what all this costs us in money, aside from the human misery and inefficiency which results?"

"Well, doctor, this is a sad tale. It is so serious that I almost fail to grasp it all. What is the Government doing about it?"

"Oh, haven't you heard? Well, the Dominion and Provincial Governments are co-operating in a campaign against Venereal Diseases. About \$400,000 will be spent this year. Clinics are being established in each of the Provinces and already thousands of infected people have come under treatment. If you ask your Health Officer you may find that there is one in your city. There are trained physicians in charge of these clinics and soon there will be little excuse for any infected person to avoid treatment."

"That's fine. But what else? I have always thought that immorality had something to do with the problem. How are they going to stop that?"

"Well, now, my friend, there is some truth in your suggestion. But before we start to discuss it, you know, of course, that thousands of infections are innocent. Most of us have made the mistake of thinking of venereal diseases as disgraceful diseases because immorality is so often their cause. Many people contract them through absolutely no fault of theirs. And you know even the prostitute is more sinned against than sinning. I think that statement may be made even of the average so called immoral person."

"Why that's a queer statement, doctor. What do you mean?"



"Well, it is hard to go into it all here, John. It's a big question. But if you expect people to be good and to live morally you have got to teach them and give them a fair chance. We don't teach our children idealism and chivalry as we should. And our parents, a good many of them, know little of the dangers their children may be exposed to as they grow up. We have got to teach them both."

"Yes, I can see that. Ignorant parents can't be of as much help to their children as those who have been instructed. Do you think there is more than just education to be undertaken?"

"Well, rather. John, we have got to specialize on giving the young people a square deal. We must avoid our old habit of neglecting them and then blaming them when wrong things happen. We must study and find what the normal is and then try to provide normal things for people."

"What do you mean, doctor? That is vague."

"Yes, I know it is. Well, for example, this. We don't provide people with proper facilities for healthy recreation. Don't you think it would be a fine thing if our churches would systematically utilize their idle buildings and grounds instead of allowing young people to drift into, for example, unsupervised dance halls, where they may meet strange and undesirable companions."

"Would you approve of the school buildings in your town being opened up at night so that young people might have dancing, debates and games or perhaps take part in an amateur dramatic entertainment? All that sort of thing adds to their mental equipment, you know."

"Yes, I can think of districts in my city where that would be very useful. What else do you call normal?"

"Do you think, John, it would be a good thing if our churches, schools and parents—and the newspapers too,— would actually preach the desirability of early marriage—and do more to teach our young people that love, and a home and children and real happy family life are just about the finest thing in the world? Wouldn't it be fine if we could get away from our too common cynical attitude towards what really should mean most in the life of a man or woman?"

"Yes, doctor, fine. But you seem a bit utopian in your ideas. It's a bad old world you know and reforms are slow."

"Fiddlesticks, John. We can get anything if we try hard. By the way, you know of the work of the Canadian National Council for Combating Venereal Diseases, don't you?"

"Yes, I have heard a little about the Society. How did it start and what is it?"

"Oh, it was organized at a conference held in Ottawa in May, 1919. A conference called by the Dominion Government. The Council is composed of citizens who want to help the Government and to help your Health Officer in the fight against Venereal Diseases. It is tremendously interested in all of these problems I have told you about. And the best of it is that there are already a lot of committees working on them and trying to get them solved. They will get some of them solved too. Just watch and see."

"How many committees are there?"

"Oh, many, nearly all the Provinces have branches working and a good many cities."

"How do these branches work? What do they do?"

"Well, John, first of all they work out how they can best help the Medical Officer of Health. They find they can help in a good many ways. Committees so far have rather specialized on speakers and moving-pictures. 'THE END OF THE ROAD' has been shown over most of Canada and has taught a valuable lesson to thousands. Speakers are trained in the various aspects of the question and sent out to lecture, first of all, on the dangers of Venereal Diseases, so that infected people may get treated and people who are not infected informed so that they may not become infected.

"Then, too, speakers are sent out to talk to assemblies of teachers, to audiences of parents gathered in schools, to audiences of clergymen, labour leaders and clubs. You know the subject is so vital that it is important to permeate the whole community with educational propaganda."

"Yes, yes, I can see that. Does the National Council do nothing else?"

"My dear fellow, the committee of the National Council are as far as possible working on all aspects of the question."

"Each branch has or will have a medical committee, a committee of nurses, a committee of social workers, a literature committee and so on. We expect to have others as new problems arise. For instance, the clergymen can help us a lot."

"Good. I see you are getting ahead. Apparently your idea is to get the whole community at work backing up the authorities so that eventually there will be no disease left and people will be a good deal happier too. Do you know I am tremendously interested. Tell me, though, how can I help?"

"Well, John Smith, you surely can help even if you haven't time to work a committee. If you're a father you have a duty to your children—a duty of education and protection which you haven't realized. You should look after that. If you're a clergyman and



haven't studied the problem seriously I advise you to read it up. You can help your congregation to do more community good than ever before. If you're an employer of labour you'll find there's some way in which this constructive work may be of value to your employees. Whoever you are, John Smith, this is a problem in which everyone should be interested as a citizen. What do you think about it?"

"Right you are, doctor, and I am with you."

"Good day, John Smith."

"Good day, doctor."

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# The Forward Movement in Public Health and Its Relationship to Social Advance

BY DR. CLARENCE MILLER, M.H.O., *Stellarton, N.S.*

Presidential Address delivered at meeting of the Association of Medical Health Officers of Nova Scotia, held at Kentville, July 6, 1920.

AT the commencement of this address, permit me, Mr. Chairman, to offer my congratulations on your election to the Presidency of the Health Officers' Association of Nova Scotia. I bespeak for you the same kindness and courtesy extended to me during my tenure of office, and I know that you will appreciate as I have, the honour of having been President of an Association whose aim is the highest physical and social well being of the people of our Province.

I may say, sir, that I found it, a not altogether easy matter, the selection of a title for this address; so much has been said and written on Public Health Welfare, socially and otherwise during the past two years, so much indeed, that you may scarcely hope for anything new or original from one who is only a part time health officer—and that a very small part—but I trust that you will not apply too keenly Sheridan's remark to his opponent, viz.:—"I have listened very attentively to the gentleman's address. There is much in it that is original and much that is good; but what is good is not original and I am sorry to add the original is not good; but one other comment is necessary, the gentleman has drawn upon his memory for his eloquence and upon his imagination for his facts."

The forward movement in public health is strictly apropos with the *modus operandi* of the post-war period, a period demanding industrial and social readjustment and associated with which there is a deep-seated unrest, unfortunately, very often, an unrest tending to maladjustment and a defeat of the industrial and social advances desired: but in the public health forward movement, whatever may be said of other movements, this is unquestionably one of "uplift", it is based on the true conception of reconstruction, viz.: that of co-operation towards the attainment of the health and happiness of the people of this Province. It seeks neither surplus profits, higher wages, nor dividends, its chief desiderate and only dividend sought, is the most effective human being physically and mentally, recognizing this factor as the only true solution of an effective development in social advance.

We are, as a result of the Great War of Nations, entering upon a uniform and elaborate system of Public Health endeavour. We must advance or retrograde. If we neglect the opportunity to



advance we shall prove ourselves false to the great duty of our generation, just as we would have done if we had failed to answer the summons in nineteen hundred and fourteen of democracy and the call of free institutions against the tyrannical forces of autocracy, however, let me say, that the suggestions and plans embodied in the Forward Health Movement of to-day did not have their inception with the signing of the peace treaty nor when our forces were mobilized in nineteen hundred and fourteen. Many of them were conceived in the minds and hearts of medical men and philanthropists of the latter part of the nineteenth century and advocated by them with burning zeal—and when as a result of the War these problems confront us with their tremendous importance, we pause for a moment and pay tribute to the pioneers of thought in physical and social endeavour. They blazed the trail for us, although the process of blazing was of necessity incoherent, isolated and individualistic. The time was not ripe for co-operation, but to-day we have a rounded out plan, for the application of conscious systematic health control, and, sir, the architect of this plan calls upon us from the fields of Flanders, and in a voice of clarion tone, "To you from falling hands we throw the torch. Be yours to lift it high. For if ye break faith with us who die. We shall not sleep though poppies blow in Flanders' fields."

The war erected a colossal health organization to which was confided the care of millions of men in the army cantonments at home and overseas. Through this organization thousands of lives were saved. Thousands declared unfit and great possibilities revealed to us in their rehabilitation. It may take us some time to digest all the revelations, but the war has given us the great body of facts upon which to base our action, in perpetuating in civil life, what has been accomplished in military life. A terrible price has been paid to learn these facts, to reject or refuse them on one part would be one of the greatest blunders we could make, consequently we mobilize for peace as we mobilized for war, and above all we are mobilizing our intelligence along Public Health lines.

The Public Health forward movement as a factor in social advance are complimentary. You cannot have social advance with a low standard of physical and mental well being. Your industrial, educational, and in fact, your whole economic life depend upon a high standard of Health; it is our greatest national asset, it has even a moral significance, the strongest Saint is not above physical weariness; many a man has been caught off guard at a time of physical strain with resultant mental depression and has committed acts, that in his stronger moments he would absolutely shun, and I believe, that the trouble with a great deal of public health work in

the past is that it has too often lacked the social point of view. We have failed to see that we are merely dealing with the social problem in some of its physical aspects, for instance, tuberculosis as a preventable disease is rooted in all kinds of physical and moral condition in Society. You cannot touch the tuberculosis problem without picking up with it the problems of "human living together" which we may in fine term the social problem, and I trust that we are fast approaching the day of a "medical sociology" so comprehensive that it will recognize the inter-relations of all our physical problems with the social problems and aspects of human life. The twentieth century does not call for sunned crowned men who live above the clouds, but for those who tread earth's ground and minister to mankind with all their might, having a knowledge and discernment of those things which cause misery to mankind, a knowledge of the influences producing degeneracy and a knowledge of how to adjust the anti-social elements.

This Forward Movement I grant you, is somewhat at variance with the universal law of natural selection as promulgated by Herbert Spencer, who found grave fault with governmental and social organizations on the ground that they were interfering with the beneficial operation of this law. As a scientist he recognized that Nature's discipline was inexorable, those who did not rise to her standard perished, those who did, survived—and yet we as medical men, zealous, rebellious and practical, carrying on our professional work imbued with a love for humanity, are compelled to admit that our standard is food and life for all, and we measure by the number of human beings we can keep in life. When we find that thousands of men and women incapacitated by disease can be restored to society well enough to contribute a high standard of efficiency in both public and private life, we are convinced that the end justifies the means. As public health officials, fortified and inspired by the doctrine of Prophylaxis, we claim that humanity can occupy a position where it will be the more enabled to survive nature's demands. Prophylaxis has within its scope "*Mens sana in corpore sano*" of those who would otherwise be unfit. It is the antithesis, so to speak, of the doctrine of the "survival of the fittest."

The Public Health Forward Movement by reason of its doctrine of Prophylaxis has a vision of better things to come for our national manhood, womanhood and childhood—a clear cut conception of the public health needs of our province and Dominion. Armed with this principle we do not follow any fads or Utopias, but press forward to a reconstruction based on humanitarian needs. It has swung us past the idea "that somehow good will be the final goal of ill, to pangs of nature, sins of will and taints of blood, through



it we shall strive to see from a physical standpoint that nothing walks with aimless feet, that not one life shall be destroyed or cast as rubbish to the void when God has made his pile complete.

Time will not permit my discussing the value of Sanatoria for the tubercular, institutions for the feeble minded, maternity hospitals, Public Health laboratories and the care of the criminal, as a part of a well organized Public Health Forward Movement, but there are two problems confronting us, complementary ones, upon the proper solution of which determine the future or success of Public Health work. I refer to the care of the women during the pregnant period, the prenatal care of the infant—and the postnatal care of the child, summed up in the one problem of "Child Welfare." Unless we apply ourselves to the proper execution of this problem, we may swell every expense and accumulate every assistance to the successful furtherance of many other aspects of public health work, and yet our efforts will be vain and impotent in that we shall be building a superstructure without any foundation. If we do not stress these problems, twenty-five years from now, our Sanatoria will again be filled, likewise our feeble-minded institutions, our hospitals, and even our penitentiaries, and we shall again be face to face with that eternal question "Cui bono" colloquially expressed—what good will it do? What is the use?

Now what are some of the essential questions involved in these two problems; as I have stated before, they are complementary, that which benefits the mother, assists the prenatal and postnatal development of the child.

First, there is the question of heredity, if it is bad, in many cases the child is doomed at birth and no subsequent training can give to him a normal social life, although for some the psychiatric clinic may be of value, here we are convinced however, that it comes within the province of Public Health, stressing prophylaxis, to urge the segregation of the feeble-minded, the criminal and the alcoholic and the hereditary pauper and to solemnly accentuate the duties, privileges and responsibilities of parenthood. We are prepared to go further and say that it is right in demanding that syphilis and other venereal diseases should be notifiable and that it should be made a criminal offence for any syphilitic person to knowingly infect another. When it comes to the question of the "Eugenic Ideal" that of mating men and women, uniting stocks with a view to race betterment—the task seems, not only great but doubtful. Gifted parents have not always gifted offspring. Handsome parents have sometimes very plain offspring; but I believe in Eugenics to the extent that there should be a close co-operation between the issuers of marriage licenses, the clergymen of our province and the Public

Health Officials, so close indeed, that those mentally unfit and those infected with specific disease within a certain period should be prohibited from marriage.

Secondly, the question of Environment. The development of the child is largely determined by his environmental characteristics both prenatal and postnatal; to what extent a special psychical bent can be deliberately imparted to the child is not yet known, apart from the Good Book, where we find the case of Samuel's mother dedicating her prospective son to the service of God with the result that he became a great master in Israel; but we do know that the child unquestionably suffers constitutionally if subjected to abnormal conditions during the prenatal period. Its healthy prenatal development, from the standpoint of environment presupposes a wage more than the bare living one, proper nourishment and good associates for the mother, freedom from work during the weeks preceding childbirth, the abolition of working conditions which use up the vitality of girls before marriage, good housing with proper sanitary surroundings, and let me say here, that some of the conditions in and around the so-called homes of our Province are deplorable. It is a far cry from the manger in Bethlehem to the auditory sense of the twentieth century, and I fear by reason of its remoteness that the cry has not been heard, for that Babe in Bethlehem of Judea born in a manger, had a clean pallet of straw to lie upon, as contrasted to some of the beds, in some of the homes in our Province, beds which are not beds and mattresses which are not mattresses.

The postnatal development of the child implies good housing and surroundings as before stated, the right to freedom from work, inspection of milk and meat, medical inspection of schools, supervised playgrounds and the right to play, and last, but not least—outdoor schools. Permit me to speak briefly on a few of these essential conditions.

First: The right to play and supervised playgrounds.

Play is an instinct with the child as with the animals. It is the child's inherent right: in ancient days this most enjoyable right was curtailed and even at the present day its value is minimized by many who do not recognize its varied functions. It unquestionably promotes physical and mental development and should form part of our public health programme,—as a factor in social advance, and we should impress the public with the importance of providing the children with supervised playgrounds where their play may be properly directed. Again, the erection of outdoor schools. I see absolutely no reason why the four months in the year, May, June, September, and October, could not be utilized for outdoor schools.



Contrast the situation of having sixty to seventy children crowded together in a closed room, with having them out in the open air. The contrast must impress your minds with the immeasurable gain in the supply of oxygen and the lessening of communicable disease and an infusion of richer blood into the veins and arteries of Canadian childhood.

With reference to inspection of meat and milk and medical inspection of schools. I believe the time has come when these very important matters must be enforced by central authority, that when not attended to by a municipality, the Government of our Province should step in and force the matter. The municipality which makes it possible for a farmer to send a can of milk to the station with dirt in it, which by reasonable precautions and compliance with law he could have kept out of it, thereby causing the death of a child, if not an accessory after the fact, is an accessory before the fact, and any such municipality should have its milk inspection, enforced by Provincial authority and made to pay for it.

The Child Welfare Problem brings the "sine qua non" of the Public Health Forward Movement in its relationship to social advance, how can we bring about its speedy fruition? The following ways and means have been suggested by many public health bodies on this and other continents:

1st: The education of the general adult public.

2nd: A whole-hearted co-operation of the general medical profession with public health officials.

3rd: Correlation of Public Health bodies with Social Service Councils.

4th: The creation of Provincial Child Health Bureaus.

5th: Enforcement of the Public Health Laws.

These ways and means embody our desires, and I believe they may be greatly accentuated by an idea which I should like to see executed, viz., "A Mass Public Health Forward Movement."

A great work has and is being carried on, along the lines of Public Health in our Province, a work which involves the highest praise for the foresight, energy and ability of the chief Medical Health Officer of this Province and invaluable as are the objectives he has attained, yet I feel that his future work may be greatly accentuated by getting just a little closer to the body politic and there is no better way of obtaining the interest of "heads of families" than appealing to them through the children. Herein lies the great point of contact.

Now, what do I suggest in a movement of this nature? Briefly as follows: Two weeks are set apart for the intensive campaign. These weeks will be preceded by advertisements in the public press.

The services of Medical Practitioners, Principals of Schools and Mayors of towns enlisted as speakers. The Ministers of the Province asked to preach sermons on Child Welfare on the town Sundays of the intensive campaign. Social Service Councils, Red Cross Societies, and Boards of Trade will co-operate in matters pertaining to organization. Each adult person in town and country will be solicited for membership in the Red Cross Society, fee \$1.00 per year, and as a follow-up measure, a permanent Public Health Committee with the Medical Health Officer at its head will be formed in each town, whose duty will be to place various health matters before the Social Councils. I believe that this scheme is possible. It requires some organization, will-power and an inspiration engendered with the idea of capturing the heights of Nova Scotian Childhood for health and happiness. By such a scheme we can better obtain the support of the medical profession. It will make it very much easier to obtain enforcement of our Public Health laws, for as you all know, acts and laws are of very little value unless a majority of the public are in sympathy with them. I feel quite confident, if we can execute this idea of a "Mass Public Health Forward Movement" that if a maternity hospital, or tuberculosis sanatorium is urgently needed, if inspection of milk, meat or medical inspection of schools is asked for and not forthcoming, that the matter may the more easily be taken out of the hands of the municipality or town and carried out by the Provincial Government, supported by the entire medical, clerical, educational and industrial units of our Province. We shall, by inaugurating such a scheme, arrive at the place where medical health officers no longer will remain in the mountain of solitude where their vision becomes well-nigh impaired by the lack of co-operation. If reconstruction means anything, it must inevitably mean co-operation, if construction means anything it also means co-operation. The work of the Public Health Forward Movement is both reconstructive and constructive: reconstructive in the sense that we are reconstructing institutions already established, constructive in the sense that we are formulating new ideas and devising new plans, as applied, say to Child Welfare.

I believe that by this method of a Mass Public Health Forward Movement we may the more readily obtain that close co-operation on the part of the men and women of our Province, that in their minds one increasing purpose will run; the purpose with a vision of the Public Health needs, especially of our children—so that they may grow up healthy and virile and in future days contribute a monument to this Province and Dominion which time can never efface.



# The Victorian Order of Nurses

## Prenatal Visiting Under the V. O. N.

EDITH HASLAM, R.N.

SINCE compulsory notification of pregnancy seems a very remote possibility, Victorian Order Nurses, in fact all Public Health Nurses, must depend upon other sources for information regarding early pregnancy. In the Victorian Order, it is the rule for the nurses, by their high standard of work, to enjoy the confidence of the local doctors, who send to the District Superintendent, or the nurse working alone, a list of those of their patients who consult them in the early months; thus enabling the nurses to get in contact in sufficient time to pay a regular series of visits, which, by their very repetition, form a tie with nurse and the mother which continues after the birth of the baby and so establishes Child Welfare.

Attendance at the lying-in period also affords a valuable opportunity of pointing out the benefit of prenatal care and teaching, and whole neighborhoods have formed the habit of advising the mother-to-be to consult the V. O. Nurse. If School nursing is being done by the Order, a home visit often develops into a "prenatal," and in winning the mother's heart by her interest in the school child, the nurse is able to advise the mother regarding the health of not only herself but in her preparation for the coming baby. Tradition dies hard but when the nurse has that inspiring vision of the future developments this educational work is sure to bring about, when mothers and babies will no longer suffer unnecessarily, not so much from ignorance as from lack of knowledge, and when she learns contentedly to look five years ahead for big results, she will find much more joy in her work and will carry on with a valiant heart.

As most of the V. O. Districts conduct a well baby clinic the writer would like to see these premises used one afternoon each week as a "Maternity Centre." The development of this will be slow but with patience and skill the nurse will find the attendance steadily increasing and the interest aroused will prove of immense educational value. The nurse could see a far greater number of patients during such a meeting than she could visit in one afternoon and the work would give her an added interest in her week's

routine as well as providing another outlet for her initiative and enthusiasm, both of which are so essential to the modern Public Health Nurse. The expectant mother soon learns to look forward to the classes; voluntary workers can usually be found to amuse the toddlers in another room, if they must be brought along, and patterns of suitable baby clothes made up and displayed on a sheet on the walls along with posters displaying simple health rules, all combine to make the centre attractive. Teaching, of course, is the chief feature of the Centre, simple talks by the nurse on prenatal care, nutrition, suitable diet, and demonstrations with a life sized baby doll, all help to awake that healthy spirit of competition and interest so necessary to the "better baby" movement.

In England these Centres hold an ante-natal clinic on the same day, which, is usually conducted by a sympathetic woman doctor, whose personal interest in her patients, combined with the home visits of the nurses so often means the averting of threatened danger. Swollen ankles and feet, and successful breast feeding in the most unpromising cases are only two of the encouraging results of these clinics—one case of neglected personal hygiene gave joy to a nurse when after weeks of advising, the patient was met on her way from the public baths saying she felt ten years younger.

Even apart from the clinic a maternity Centre will provide the nurse with unlimited scope and the developments along this line which our go-ahead neighbors across the border are adopting, combined with the wide range of literature now available on this subject, and the advice from the local doctors, should help a nurse to attempt the new venture, so that the mothers, not only of to-day but for the next ten years, may have the help in this direction through the Order in those districts which are not yet fortunate enough to be served by a comprehensive Municipal or Provincial Department of Health, the Women's Institutes, Girl Guides, Y. W. and Church Clubs of all denominations together with the Little Mothers' Leagues could easily invite the V. O. Nurses to give series of talks on those subjects which will teach the girls what their future babies have the right to expect from them.

And if the girls and women are to acquire this knowledge, why not, through the many boys' and men's organizations ask the doctors to give similar talks on the responsibilities of the male parent? Cradle-Slackers must go, we must no longer deny the fathers that knowledge which will help them to find comfort and joy in their children. The writer's own experience as a Public Health Nurse for the past five years has taught the value of an intelligent interest on the part of the father.



## New Course at St. John, N.B.

In the early part of December the Victorian Order of Nurses received an urgent call for nurses to be placed in the province of New Brunswick. The Provincial Red Cross sent a nurse, Miss Ruddick, to make a survey of the province and report regarding conditions in the several communities. This report was very enlightening as to the necessity of community nursing service.

The Victorian Order was unable to supply nurses for any new posts owing to the increasing demand for more staff nurses in the districts already established. The need became so urgent that the Red Cross proposed financing a course in District and Public Health nursing if the Victorian Order would establish such work in connection with the St. John Centre. The Chief Superintendent visited St. John and arrangements were made to begin training the first day of February. This course is financed by the Red Cross, approved by the Provincial Department of Health and affiliated with the University of New Brunswick which will give the certificate.

Careful survey disclosed the fact that there was ample field in St. John for both theoretical and practical work for such a course. An Instructor, Miss Jessie Forshaw, R.N., was brought from Vancouver, where, for the past year, she had been Provincial Organizer for the Victorian Order. In addition to the Victorian Order training, Miss Forshaw had completed a course in Public Health Nursing at the University of Washington. Miss Cole, the recently appointed Inspector of the Order has been in St. John assisting with the preliminary arrangements. Miss Cole, as former District Superintendent of the Vancouver Centre, was very familiar with the work due to the Course in Public Health Nursing organized in connection with the University of British Columbia.

Six students have already commenced their studies with considerable enthusiasm. This is a four months' course, and on its completion another course will be immediately begun. The nurses taking this course are pledged to give a year's service to the Province of New Brunswick.

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The Edmonton Branch of the V. O. N. have held a most successful Annual Meeting. It was found necessary to add another nurse to the staff, also to provide transportation, the Edmonton field is so extensive that street-car service does not meet the needs of the nurses. The students taking the provincial University Public Health course are getting part of their field and observation

work with the V. O. nurses. Miss McRoberts has undertaken to look after the health of the Children's Aid Boarding Home. They have a number of Child Welfare Clinics, and there is always with this work heavy maternity service. A very pleasant feature of the meeting was the increase of the salaries of the nursing staff.

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The Chief Superintendent attended the Annual Meeting of the Dundas district. The one nurse, Miss Pearson, is greatly over-worked owing to many night calls. The Committee is considering ways and means of purchasing a car.

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The City of Moncton, N.B., started a nursing service about a year ago with a staff of two, which has proved most satisfactory and the Committee are considering placing a third nurse in the district.

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Miss Agnes Hachey, who has done such successful School and Child Welfare work in Cobalt, Ontario, has been transferred to Grand Mere, Que. Miss Hachey speaks French and English perfectly, which renders her services of great value in school work and dealing with the follow-up work in the homes. Miss Hachey is very valuable in the educational work, especially with the classes in Home Nursing that are so popular in connection with the Victorian Order work in Grand Mere.

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The Home Branch of the Soldiers' Settlement Board has been giving short courses to groups of soldier's wives living in the rural communities. Such a Course was recently given at Ottawa where twenty women had the advantage of a week's outing, with lessons on dairying, cooking, and some little amusement thrown in. Those who had small babies were looked after and in some cases had medical attention. Miss Stevenson, District Superintendent of the Victorian Order, and her staff, gave lessons on Home Nursing during one day of their stay, together with tea and a general discussion as to the care of their children of all ages.

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# Social Background

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## The National Council of Social Work

The next annual meeting of the National Conference of Social Work will be held in the city of Milwaukee from June 22 to 29. A programme of especial value and interest to all those concerned in the subject of health will be presented at this meeting. The programme for Division III., on Health, provides for five division meetings, at which the following subjects will be presented:

**"Co-operation and Co-ordination in Health Work."**

- a. The National Council of Public Health—Organization and Programme.
- b. National Council for Co-ordinating Child health Activities.
- c. How Can Voluntary Organizations Best Co-operate with Health Officials?

**"The Health Programme of the American Red Cross."**

- a. The Social Significance of Health Centres.
- b. Co-operative Health Plan of the New York County Chapter.
- c. Public Health Nursing Programme and Activities of the A. R. C.

**"Social Significance of Child Health Work."**

- a. Education in Health Habits.
- b. What State Bureaus of Child Hygiene are Doing to Promote Child Health.

**"Government Agencies in Their Relation to Health."**

- a. The United States Public Health Service.
- b. The Children's Bureau.
- c. Department of Agriculture, Extension Service in Home Economics.
- d. Bureau of Education.

**"Certain Elements in a Health Programme for Children" (Joint session with Division I.—Children).**

- a. The Undernourished Child—The Significance of Bringing Him up to Standard.
- b. Where should this nutrition service next be centered: in the school room; in the child's own family, in the Home?
- c. How much more may be expected from medical service in the public schools?

Among others who will speak at these meetings will be: Mr. Sherman, C. Kingsley, Dr. E. V. McCollum, Mr. Courtenay Dinwiddie, Dr. C. A. Pierce, Dr. Anna E. Rude, Dr. C. F. Langworthy, Mr. Willard S. Small, Mr. Philip Platt, Dr. Donald B. Armstrong, and Mr. J. Mace Andress.

In addition to these five great division meetings, there will be one general night session of the Conference devoted to the subject of Health. At this night meeting, the specific subjects considered will be, "Making Health Knowledge the Property of the Community" and "The Social Need of a National Health Programme."

The conference will hold its meetings in the auditorium, which is the most remarkable building of its kind in the United States. It has all the requirements necessary for the ideal convention hall, ample seating capacity, perfect appointments, accessibility and adaptability, absolute safety, complete accessories in the shape of wardrobes, toilets, telegraph and telephone, storage accommodations with ample provision for exhibition space, banquet and assembly rooms, and committee rooms. It occupies an entire square just north of the main thoroughfare of the city and is readily accessible from all railway stations and interurban lines and forms the nucleus for the projected Civic Center of the City of Milwaukee.

The main auditorium is constructed without a single pillar or post to obstruct the view. It is located on the ground floor, and all parts of the hall may be reached from the street without ascending the stairs. It has a flexible seating arrangement so that from 5,000 to 10,000 persons can be comfortably seated, and the acoustic properties are exceptionally good. All meetings of the Conference, both General and Divisional, will be held in this one building. In addition to the great General Assembly Hall, there are four other large halls seating from 900 to 1,200 persons each. This will be the first time in the history of the National Conference that all the meetings could be held under one roof without crowding or inconvenience.

Milwaukee in June is an ideal convention city, located as it is on the shore of the lake, with ample parking and beach facilities. No section of the city is without a public park within ten blocks of it. Over 1,200 acres, all connected by a boulevard system, constitute the park system of this great city of the central west. In addition to its parks, the city has forty public playgrounds.

There are daily boat lines with large steamships from Chicago, and from cross lake ports. It is possible for visitors to come to Milwaukee by all-lake line from Buffalo or by part-way lake travel



from Chicago, Detroit, Grand Haven and other ports. The Chicago North Shore Electric Road operates hourly trains from North Evanston.

Hotel accommodations are ample as has been proven by the fact that Milwaukee has entertained so many large conventions in the past few years.

A large number of allied organizations will hold meetings in Milwaukee either immediately prior to or during the week of the National Conference meeting. Among these allied organizations will be: The Lutheran Inner-Mission Society, Social Service Department of the Protestant Episcopal Church, Public Health Nurses' Association, the National Urban League for Social Service among Negroes, the Jewish Conference of Social Welfare, the Canadian Conference of Public Welfare, Foreign Community Workers, National Board of the Y.W.C.A., the National Association for Community Organization, the American Association of Hospital Social Workers, National Federation of Day Nurseries, Interstate Conference on Illegitimacy, National Probation Association, National Conference on Education of Backward, Truant, and Delinquent Children, American Association for Organizing Family Social Work, National Children's Home Society, National Child Labor Committee, and National Travellers' Aid Society.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF JANUARY, 1921.

#### COMPARATIVE TABLE.

| Diseases.                  | Jany., 1921. |           | Jany., 1920. |           |
|----------------------------|--------------|-----------|--------------|-----------|
|                            | Cases.       | Deaths.   | Cases.       | Deaths.   |
| Small-pox .....            | 902          | 3         | 1,188        | 6         |
| Scarlet Fever .....        | 613          | 17        | 642          | 21        |
| Diphtheria .....           | 876          | 63        | 636          | 70        |
| Measles .....              | 595          | 9         | 1,296        | 16        |
| Whooping Cough .....       | 396          | 9         | 162          | 19        |
| Typhoid .....              | 43           | 13        | 42           | 12        |
| Tuberculosis .....         | 166          | 114       | 145          | 135       |
| Infantile Paralysis .....  | 3            | 3         | 2            | .....     |
| Cerebro-Spinal Meningitis  | 2            | 2         | 8            | 7         |
| Influenza and Pneumonia... | 34           | 18        | 669          | 24        |
| Primary Pneumonia .....    | .....        | 271       | .....        | 297       |
|                            | <hr/> 3,630  | <hr/> 522 | <hr/> 4,790  | <hr/> 607 |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

| Diseases.        | Jany., 1921. | Jany., 1920. |
|------------------|--------------|--------------|
|                  | Cases.       | Cases.       |
| Syphilis .....   | 195          | 112          |
| Gonorrhoea ..... | 245          | 94           |
| Chancroid .....  | 12           | 3            |
|                  | <hr/> 452    | <hr/> 209    |





# Joint Public Health Convention Programme

A WIDE range of interesting papers will be read, and subjects discussed by members of the Ontario Health Officers' Association at the Joint Public Health Convention to be held in Toronto, May 16th, 17th and 18th.

The Convention will be held in the University of Toronto Mining Building, College Street, and in addition to the Ontario Health Association, will include the Canadian Public Health Association, the Canadian Association for the Prevention of Tuberculosis and the Canadian National Council for Combating Venereal Disease. An attendance of over 600 is expected.

This important convention will cover every phase of Public Health work, and should prove of inestimable value to all those who avail themselves of the privileges it will afford. The event marks the twenty-first Annual Meeting of the Canadian Association for the Prevention of Tuberculosis, the tenth Annual Convention of the Canadian Public Health Association, the seventh Annual Meeting of the Ontario Health Association and the third Meeting of the Canadian National Council for Combating Venereal Diseases.

The papers to be read by the Ontario Health Officers on Monday and Tuesday will deal with "Water Supplies," "Medical Inspection of Schools," "Home Influence or Resistance against Disease," "Public Health Expenditure," "Mental Defectives," "Notes on Sanitary Surveys of Rural Schools," "Difficulties of Milk Inspection," "The Public Health Nurse and her work," "Physical fitness," "The desirability and difficulty in the early diagnosis of Infectious Diseases," etc., etc.

The programme of the Convention has been arranged as follows:—

On Monday, May 16th at 9 a.m. registration will commence, and at 10 a.m. the First Session of the Ontario Health Officers' Association will meet under the presidency of Dr. D. A. McClenahan, Hamilton. At the same hour the Laboratory Section of the Canadian Public Health Association will hold an important session under the chairmanship of Dr. R. H. Mullin, Professor of Bacteriology and Public Health, University of British Columbia, Vancouver, and will receive a report of Committee on the Standardization of the Wassermann Test. Interesting dis-



cussions will be held, as there are over 80 bacteriologists in Canada, many of whom will attend and take part in the programme.

On Monday afternoon there will be a General Session of the Convention with the Presidential address by Dr. John Amyot, C.M.G., Deputy Minister of Health, Ottawa; also an important address on the "Control of Communicable Diseases" will be given by Dr. Charles V. Chapin, Providence, R.I. A paper on State Medicine will be read by Dr. J. G. Fitzgerald, Professor of Hygiene, University of Toronto.

On Monday evening the programme will be a contrast to that of the afternoon and will afford a choice of either studying the practical workings of a Venereal Disease Clinic, or studying Child Hygiene as arranged by the Pediatric Committee of the Child Hygiene Section C.P.H.A. The Venereal Disease Clinic will be held at the Toronto General Hospital and Dr. Powell of Montreal will read a paper; the Child Hygiene Session will be held at the Sick Children's Hospital.

Tuesday morning.—On Tuesday morning the second Session of the Ontario Health Officers' Association will be held, at the close of which officers will be elected for the ensuing year. Many interesting papers on the various phases of Public Health Work will be read at this meeting. Other sessions being held simultaneously on this date will include the Social Hygiene Session with an address by the Chairman, Rev. Archdeacon Symonds, Montreal, and the following papers will be read:—"Commercialized Vice in Montreal" by Owen Dawson, Secretary of the Committee of Sixteen, Montreal; "Social Aspects of the Venereal Disease Problem" by Miss Edna Moore, Provincial Board of Health; "Campaign against Venereal Diseases adapted to Local and Provincial needs" by Dr. Gordon Bates; "Ethical and Spiritual Consideration in the Campaign against Venereal Diseases," by the Rev. Father Minehan. Other simultaneous sessions held on this date will be that on Child Hygiene under the chairmanship of Dr. L. M. Lindsay, Montreal; and of Mental Hygiene under the chairmanship of Dr. C. K. Russel of Montreal.

Tuesday afternoon will be devoted chiefly to "Field Work" with visits to Child Welfare, Ante-Natal and Malnutrition Clinics, and for those interested in Sanitary Engineering a visit will be made to the Toronto Island Filtration Plant. In addition, a Laboratory demonstration will be provided in the Medical Building showing the method of preparation of serums and vaccines. The Annual Meeting of the Canadian National Council for Combating Venereal Disease will be held at 3 o'clock on this date.

On Tuesday evening a session of particular interest to both professional and lay-workers will be held when Dr. C. J. O. Hastings, M.O.H., Toronto, will deliver an address on "The Milk Problem." It is expected that this meeting will be addressed also by Dr. Chagras of Brazil.

Wednesday morning has been reserved for the Canadian Association for Prevention of Tuberculosis and a detailed programme of this meeting is given on the page following this announcement.

On Wednesday afternoon the second Session of the Canadian Association for the prevention of Tuberculosis will be held, as well as the final Session in the Canadian Public Health Association at which there will be shown a film of special interest dealing with "School Inspection," and a report received from the Committee on "Medical School Inspection." This whole session will be of special interest to the Public Health nurses, and a paper will be read on Public Health Nursing, followed by a discussion the details of which will be given in a later issue.

The annual business meeting of the Association is of importance, in view of the fact that the budget and treasurer's reports for the year will be presented.

## Hotel Accommodation

| Hotel                         | Address | Single | European                |                         | Double with bath                      | American                |                   |
|-------------------------------|---------|--------|-------------------------|-------------------------|---------------------------------------|-------------------------|-------------------|
|                               |         |        | Single with bath        | Double                  |                                       | Single                  | Double            |
| Carls-Rite, Front & Simcoe    |         | \$3.00 | \$3.50<br>and<br>\$4.00 | \$6.00                  | \$3.50<br>and<br>\$4.00<br>per person | \$5.00                  | \$10.00           |
| Elliott, Church & Shuter .... |         | \$2.50 | .....                   | \$4.00                  | \$5.00                                | \$4.00                  | \$8.00            |
| King Edward, King St. E...    |         | \$2.50 | \$4.00                  | \$4.50                  | \$6.00<br>and up                      | .....                   | .....             |
| Pr. George, King & York...    |         | \$2.50 | \$3.00<br>and<br>\$3.50 | \$4.00<br>and<br>\$5.00 | \$5.00<br>and<br>\$6.00<br>and up     | .....                   | .....             |
| Queen's, Front St. W. ....    |         | \$2.50 | \$3.50<br>and up        | \$5.00                  | \$6.50<br>and up                      | \$5.00<br>and up        | \$10.00<br>and up |
| Walker House, Front & Yk.     |         | \$2.50 | \$3.50                  | per<br>day              | per<br>person                         | \$5.00<br>and<br>\$6.00 | .....             |
| Waverley, Spadina & Col.      |         | \$2.00 | \$2.50                  | \$3.00                  | \$4.00                                |                         |                   |
|                               |         | \$2.50 | \$4.00                  | \$3.50                  | \$6.00                                |                         |                   |
| Westminster, Jarvis St. ....  |         | .....  | \$2.50<br>and up        | .....                   | \$4.00<br>and up                      |                         |                   |

Everyone is urged to make early reservations directly with hotel concerned, or through Chairman of Committee on Hotel Accommodation, Dr. A. Grant Fleming, Department of Health, City Hall, Toronto.

Railway Rates.—Standard certificate plan will be in force for the Convention. Details will be furnished in preliminary programme to be mailed early in April.



## Canadian Association for Prevention of Tuberculosis

An event of unusual importance both to the medical profession and the general public, is the Coming of Age of the Canadian Association for the Prevention of Tuberculosis, on Wednesday, May 18th, in the University of Toronto, Mining Building, College Street, the occasion being the twenty-first annual meeting of this Association which has such a praiseworthy record in its fight against "The Great White Plague" throughout this Dominion.

Secretary, Dr. George D. Porter, to whose energy and activity the work of the association owes a large measure of its success, will read his Annual Report at 10 a.m. on May 18th. This will be followed by a report from Dr. O. Leclerc, Quebec, on the Anti-Tuberculosis Organization in France, after which the Presidential Address will be given by the Hon. F. L. Schaffner, M.D., of Winnipeg. Papers will be read by John B. Hawes, M.D., Boston, Mass., and J. Roddick Byers, M.D., St. Agathe, Quebec, and an X-Ray Demonstration by G. E. Richards, Toronto.

The practical side of the work will also be given much attention for in the afternoon Dr. Parsons will conduct a Chest Clinic at 2 o'clock in the Hospital for Sick Children, and Dr. Caulfield will conduct a similar clinic at the same hour in the Toronto General Hospital. A visit to the Preventorium will be made at 4 p.m. The following morning at 9 o'clock Dr. Ogden will conduct a Chest Clinic at the Western Hospital and another chest clinic will be conducted by Dr. Caulfield at the D.S.C.R. Hospital, Christie Street.

This programme will form a part of the Joint Public Health Convention commencing on May 16th, comprising the Canadian Public Health Association, the Ontario Health Officers' Association and the National Council for Combating Venereal Diseases. A splendid opportunity is thus afforded all visitors to the Convention, of covering a wide range of subjects dealing with Public Health and Prevention medicine.

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## News Items

Dr. Fred Conboy has resigned the position of Supervisor of the Dental Inspection under the Department of Education, Province of Ontario. Dr. Conboy has been giving one day a week organizing a School Dental Service for the Province. A permanent provincial school officer will be appointed.

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The annual meeting of the Ontario Medical Association will be held at the Clifton Hotel, Niagara Falls, Ont., in May.

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Dr. C. J. Hastings, Medical Officer of Health, Toronto, has been enjoying a rest at St. Petersburg, Florida.

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The annual meeting of the Canadian Red Cross Society was held at Toronto in March. Representatives from all the Provincial Branches were present and the meeting was honored by the presence of His Excellency, the Duke of Devonshire.

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Over 75,000 of the Diet Folders, prepared by the Child Hygiene Section, have been distributed to date.

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As considerable interest was excited among tuberculous patients from a report that the British Government had purchased a reputed cure for this disease, word has been received that no such purchase has been made and that there was no scientific evidence of its value.

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The New Brunswick "Health Week" will be held from April 24th to April 30th.

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National, Provincial, municipal and voluntary agencies are invited to send in reports of their Child Welfare work, personal notes or other items of interest for reprint in this Journal. Reports to date have been received from London, Ontario, and the Provincial Board of Health, Ontario.

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Miss Christina Smith, R.N., has resigned her position as Superintendent of Provincial Public Health Nursing of Alberta to take up work at the University of Alberta in connection with the estab-



lishing of a Department of Nursing. Her successor has yet to be appointed.

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The folders on diets for children of various ages, issued by the Child Hygiene Section of the Canadian Public Health Association have been much in demand. The Ontario Board of Health is planning to distribute about 45,000 and the Provincial Board of Health of British Columbia has sent in an initial order for 5,000, while numerous smaller orders have been received from Ontario and the Eastern provinces; 6,000 have been ordered by the Manitoba Division of the Canadian Red Cross Society.

The first of this series outlines the technique of breast feeding and emphasizes a number of important rules for a nursing mother. The second of the series deals with milk, its source, care, pasteurization, etc., and gives instructions, and equipment necessary for the preparation of bottle feeding. Folder number three gives instructions for the breast fed baby, weaned at nine months, showing additions in diet for each month or two, until the child is two years of age. Folder four is for the feeding of the pre-school child, and includes recipes, and instructions for cooking the various cereals, soups, meats, vegetables, etc. The last of the series—Proper Food for Children of School Age—gives a wide variety of diet, showing proper methods of cooking and tabulating foods according to prices.

These folders are so arranged that they may be sent through the mail, as folded, with a one-cent stamp. Average height and weight tables are given for the various ages.

Sample sets will be sent upon request. Folders may be purchased for one cent each—express collect—and may be ordered in sets or separately.

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At the suggestion and with the co-operation of the Canadian National Council for Combating Venereal Diseases, the Social Service Department of the University of Toronto, commenced a Course on Social Hygiene, on March 21st. Subjects included: Social Hygiene, Professor Dale; Legislation to Promote Social Hygiene, Dr. J. W. S. McCullough; Syphilis, Dr. E. J. Trow; Gonorrhoea, Dr. B. P. Watson; The Social Case Work of the V. D. Clinic, Miss Ella Grant; Mental Defect as a Contributing Cause, Dr. Clarence M. Hincks; The Education of the Grown-Up, Dr. Gordon Bates and Miss Violet Trench; The School Curriculum, Professor Sandiford;

How to Talk to Boys, Mr. T. M. Porter; How to Talk to Girls, Miss Trench.

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Plans for launching a campaign in Toronto for the purpose of teaching the value of milk as a food and increasing its consumption in the homes were made at a meeting held in the City Hall on March 8th, Mrs. Adam Ballantyne, President of the Child Welfare Council in the chair. The movement is being inaugurated by the co-operation of the Child Welfare Council, the Canadian Public Health Association and the National Dairy Council of Canada. A most interesting address was given by Miss Holbrook of the Dairy Division of the U. S. Dept. of Agriculture, in which she described methods carried on across the line to induce children to drink milk and to persuade and enlighten parents on the need for this article of food.

Among factors tried and found successful in different cities of the American republic were the introduction of trained workers into the schools for the purpose of giving talks on food values, starting essay contests among the pupils after the talks, and giving prizes for the same as well as for publicity posters. The holding of exhibitions of milk products and the articles of food that can be made from them, the selling of milk in the streets in novel ways, as instanced by beaver-board bottles four feet high with slogan in red letters and a boy shouting the merits of milk through a megaphone, and other items. In other instances fairy pageants were put on, every department in the school contributing to the work.

The speaker pointed out that a follow-up system which first made a survey of the physical standing of the children and then began a course of milk drinking was necessary. For this, the children are lined up at recess when everyone is supplied with a bottle of milk and a straw, giving five cents a day for same. Where pupils cannot afford the money, it has been supplied by the Board of Education or the Parent-Teacher Association, which corresponds to the Home and School Clubs of Toronto. For the campaign week, speakers are needed and transportation to take them quickly from one point to another.

The fact that the work is needed in even the best situated localities was shown by the speaker, when she told of a district with 37,000 children, where the community were more alive to the situation than the average in the matter of having the best cattle, and yet it was found that the children were 69 per cent. below normal physically. Milk demonstrations were put on and all showed much improvement in a few weeks from the time the milk diet was introduced.



Committees are necessary to carry out the campaign and the following were appointed: General Chairman, Mrs. A. M. Huestis; Finance Committee convenor, Mrs. W. Bundy; Secretary, Miss Enid Forsythe; Exhibits, Miss Margaret Davidson; Speakers, Mrs. Adam Ballantyne; Transportation, Mr. John Wanless. Miss Olive Hayes, graduate of MacDonald Institute, Guelph, and later of Columbia University, who for the last five years has been Provincial Instructor of Home Economics in British Columbia, will remain in Toronto in charge of the campaign.

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In October of last year the Hamilton Patriotic Fund succeeded in establishing a Health Centre in that city, similar to the one in Montreal, where the children of returned men might be taken for examination and if necessary be referred to other existing clinics for treatment.

The clinic is held every Tuesday afternoon in the General Hospital under the direction of Dr. R. P. Smith, assisted by Miss Edith Insole, R.N., nurse in charge. Some 250 children have been examined in the clinic and the records show that 90 per cent. of them have defects, many of them of a very serious nature. A startling feature lay in the fact that apparently well children, in some cases had as many as five defects. In practically every case attention of some kind was required. X-Ray examinations, Wassermann tests, examinations for tuberculosis, and attention to various eye defects were among the procedures necessary. That there is urgent need for the proposed Dental Clinic was proved by the examination of the first 200 children, 96 of whom were found to be suffering from carious teeth. Many of them showed such pronounced evidence of pyorrhea as to affect their general physical condition.

The follow-up treatment is a valuable factor in the work of the clinic and will without doubt contribute largely to its success. By arrangement with the Babies' Dispensary Guild, to which the Patriotic Fund contributes one-half the cost of a visiting nurse, the Babies' Dispensary looks after all babies under two years of age, and refers back to the Fund's Clinic cases of illness. The clinic nurse visits all children in their homes to ensure the carrying out of the physician's orders, and every effort is made to educate the families in modern health habits.

Realizing the importance of pre-natal care and the amazing lack of such knowledge, the clinic is undertaking to give much-needed advice to expectant mothers.

One of the biggest works the clinic has to do is to educate mothers in the matter of diet for their children. So numerous are the cases of malnutrition that it is not beyond the scope of possi-

bility that the clinic may extend its work by the establishment of a nutritional department.

The clinic authorities state that the heartiest and most helpful co-operation has been secured from the various local health officials and members of the medical profession, the latter having given very wonderful service at the clinic.

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Although a healthy winter, it has been a busy one for the school nurses of Halifax as they are trying to give each pupil a thorough physical examination and a new physical record card is being made out for each one, which will be of great assistance to future work. Health talks are being given in all the grades—suitable for the age of the grade—and in the primary grades health stories are told which are listened to with rapt attention. The children are encouraged to repeat these stories to the folks at home and the following day they form the subject for a writing lesson. A few classes are beginning to dramatise the health tales and seem to find it great fun.

The Health Crusade has been started in Grades III, IV and V and about three thousand children are busy filling in health slips. In each room a boy or a girl is appointed to act as school nurse to see that the health rules are being carried out, and the improvement in cleanliness, neatness, etc., has been quite noticeable. If they carry out the health habits they are rewarded with a Crusade pin, of which they are very proud.

The pupils of the Acadian School have for a small sum of money been provided daily with cocoa by the St. John Ambulance Brigade. This makes a great deal of work for the teachers, but they are most willing, realizing the great advantage for the children.

In order to give the nurses taking the Public Health Course, at Dalhousie University, some instruction in nutritional work, a nutrition class was started last November in Quinpool Road School. This is carried out in a very simple way as there are no funds and very few conveniences in the school, but the children show great interest, have improved in their school work and have gained considerably in weight. A prize has been offered to the child who first reaches his normal weight and all are trying hard to win it. Some army cots were borrowed from the Red Cross and during recess the class rests in these while the nurse or a V.A.D., who kindly offered to help, reads them a story. They are given instruction in what they should eat and drink and how to live in a healthy happy way. This class was financed by Miss Edith Read, Principal of Branksome Hall, Toronto. We hope next year to have a nutrition class in every school in the city.



# The Public Health Journal

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## The Necessity of a Publicity Campaign Against Cancer

BY JOHN W. S. MCCULLOUGH, M.D., D.P.H.

Read before Section of State Medicine, Academy of Medicine, Toronto,  
February 24th, 1921.

Professor Wilcox, of Cornell University, has said:

"The accumulative evidence that improvements in diagnosis and changes in age composition explain away more than half and perhaps all of the apparent increase in cancer mortality, rebuts the presumption raised by the figures and makes it probable, though far from certain, that cancer mortality is not increasing."

If this were a true representation of the facts in relation to cancer the same might be said of tuberculosis, organic heart disease, or of pneumonia forming the group of diseases causing the highest mortality among our people.

It will be admitted that the present means of diagnosis are superior to those of half a century ago. The reports of deaths in civilized countries are more reliable than at any former period of our history. Consequently, it is probable that all the apparent increase in cancer is not a real increase.

If we compare, for example, cancer with tuberculosis, it will be seen that while cancer is apparently increasing, tuberculosis, in so far as Ontario is concerned, is decreasing. There cannot be said to be any extraordinary improvement in either diagnosis or mortality records in the last ten years; yet during that period the records show that while cancer has increased from 65 per 100,000 of population to about 77 per 100,000, tuberculosis under the same conditions of diagnosis and mortality records decreased in the decade from 102 to 78 per 100,000.

Leaving out influenza with its high mortality of the last couple of years, cancer stands fourth from the top of the death-dealing affections which we have amongst us. In 1919 this disease caused

the deaths of 2,182 persons in Ontario, and in the last ten years no less than 19,120 persons were victims of cancer. At the same rate the annual deaths in Canada would number about 7,000.

Hoffman, the statistician of the Prudential Insurance Company, who is a careful observer, a few years ago analyzed the cancer statistics of many countries, including the United States. Without burdening you with figures, the conclusions reached were that cancer is increasing, and that it constitutes a *real menace* to all civilized mankind. This writer goes on to say, "Irrespective of the reasons why the aggregate mortality from this disease should be so large, amounting now (1915) in the U. S. to over 80,000 per annum, it is a self-evident duty on the part of all familiar with the facts to discuss the subject with a due restraint in their utterance, but with clearness and fearlessness, so that the public may be made aware of the dreadful truth. . . . No harm is ever likely to come to any person by being unduly alarmed on this account. The harm and the dreadful seriousness lie in the ignorance and indifference and in confusion worse confounded by needless controversies over matters which in themselves are at most and at best but secondary to the supreme question as to how malignant disease can be controlled, how it can be prevented, on the one hand, and how it can be successfully cured, on the other."

In view of the title of this paper, the Necessity for a Publicity Campaign against Cancer, two points seem to present themselves. These are, *first*, the annual aggregate of deaths. This it may be repeated is large enough to be alarming. It is the fourth in our table of mortality. At ages over forty it kills one in eight among women, and one in fourteen in men. It is a disease of adult life, and at ages over 40 is a greater menace than tuberculosis or pneumonia. Its insidious onset often occurs at the most useful period of life, when the father and mother are of the greatest service to society. It frequently occurs at a time when the man or woman, due to their industry and thrift might otherwise have had years of ease and comfort before them. Once established the future is hopeless. Only a period of tortured existence remains. In the *second* place the want of knowledge in respect to the disease is not confined to the laity alone. The cause of cancer is as yet unknown. Much, however, is known about it. It is not a constitutional disease but at first a local growth, which, if recognized in the early stages, may be removed by a prompt surgical operation. The early signs of the disease are unknown to the laity and not any too well known to the majority of the medical profession. Consequently, the chief hope of controlling the disease lies in a well planned campaign of



public education, embracing facts such as the following: (1) That cancer in the early stage gives rise to no pain or symptom of ill health. (2) That the early signs are: Any lump or mass on a woman's breast after 40 years. Any bleeding, however trivial, after the change of life. Any wart or sore on the lower lip in a man 45 years of age. Any sore in the tongue after 45 years of age. Any bleeding from the bowel after 45 years of age. It should be pointed out that warts, moles or growths on the skin liable to irritation should be removed, and that irritation of the tongue and cheeks by jagged teeth or the lower lip by clay pipes should be avoided.

All means of spreading this information should be utilized, such as lectures with or without slides, moving pictures, pamphlets and particularly through the newspapers.

If the public could be impressed with a knowledge of the early signs of cancer, the so-called pre-cancerous conditions, and induced to have such conditions remedied by legitimate treatment and without delay the death rate and suffering from this disease would be greatly lessened. There is perhaps no other affection wherein the quack so successfully plays his rapacious role. All sorts of irregular practitioners promise the most miraculous cures. By this they work a double fraud upon their victims in that they not only rob these unfortunate people, but also by the loss of time involved deprive them of the opportunity of securing timely legitimate treatment.

There seems to be a real need for a publicity campaign in respect to cancer.

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## Mental Measurements as Applied to a Toronto School

BY E. J. PRATT, M.A., PHD.

Toronto Academy of Medicine, October 21st, 1920.

**F**OR the past three or four years the public medical inspection of the primary schools of Toronto have recognized the problem of mental defect by incorporating psychiatry in its programme of survey. Throughout that time a considerable number of schools with an enrolment of approximately 60,000 children came under investigation, and of this number over a thousand children were found in the class room. These comprised between one and a half and two per cent. of the total enrolment—a figure which, there is every reason to believe, holds good of the total school population of the city. In addition to this there was found a group who could not strictly be termed “mental defectives,” yet whose retardation was so pronounced that they were not only unable to keep up with the normal advance of the pupils in their own classes, but were a positive handicap to the teachers who had, as a rule, to give them more than a proportionate share of time and attention. These also were classified, and it was pointed out from time to time, in reports and addresses based upon the facts disclosed, that provision should at once be made for the adequate training and supervision of both classes concerned. The results of the investigation formed part of the evidence presented to the Commission under Mr. Justice Hodgins, and in compiling his report the Commissioner placed emphasis upon the careful sifting out, by psychiatric methods, of the mentally abnormal in the public schools.

As is well known, the complexity of the problem demands that there shall be no arbitrary limitations imposed upon the mode of investigation. A given case of defect must be studied from all relevant standpoints. Importance must be attached to the behaviour of the child on the playground, whether it is characterized by moody isolation from his fellows, by participation in sport, or by explosive and irresponsible conduct. The degree of his apathy or responsiveness in the classroom, the estimate placed upon his capacity by the teacher, the presence of certain emotional peculiarities as sullenness, obstinacy, resentment of reproof or a general negative attitude—all these must be viewed in the light of the records of the school physician and nurse, and these again interpreted from



data derived from personal and family history. There remains, then, the factor which, with a somewhat narrow meaning, has been usually described as psychological, namely, the intelligence of the child as determined by norms constructed out of the mental performances of other children of approximately the same physical age. This factor, insufficient by itself, may yet as a result of a standardized procedure be regarded as one of the most valuable single contributions to the diagnosis.

With these facts in mind, the Canadian National Committee for Mental Hygiene undertook, in co-operation with the Board of Health and the Board of Education, to make a survey of one moderate-sized school in the city where every child in attendance might be given an exhaustive examination in the Binet-Simon tests. Inspection of some of Toronto schools up to this time had shown that intelligence varied decidedly with the social status. In these schools, however, only limited numbers were personally examined, that is, only those children who were known to be considerably backward in their classes. Neither the children who were doing average work, nor those who were especially bright, were put through the routine tests; hence no conclusion which might be represented in ratios and graphs could be formed as to the mentality of the children as a whole. Still, a comparative study of results in the lower grades indicated that the stock from which the children sprang could not be neglected in estimating the significance of mental variation.

In this school under survey, 502 children were examined, from Junior First to Senior Fourth—the kindergarten excepted—and much supplementary information casting light upon special cases was gathered as a result of the intelligent co-operation of an excellent principal and a competent staff.

The complete object of the survey was:

I.—To estimate the mentality of the school as expressed by the Intelligence-Quotient of the individual children.

II.—To discover, by systematic groupings of the quotients, any correlations between mentality and social status, sex, nutrition and other factors supposedly related.

III.—To amass and systematize data which might later furnish ground for a thorough and consecutive programme of investigation into the efficiency of the children when they enter industrial life.

There will only be time to touch upon a few of these points in this paper.

Before proceeding with the main examination, the attempt was made to get a more definite idea as to the social character of the district in which the school was situated. The A. D. P. card of each child, stating the occupation of the father, was secured, and a list compiled. If the father was dead, the occupation of the mother, or at least some brief description of her mode of living, was asked for. Over thirty occupations were listed, and these again classified into three main groups, not without difficulty indeed, on account of the vagueness of some descriptions of employment, but still accurately enough for broad divisions. The first class mainly of day labourers comprised forty-five per cent. of the total; the second artisans, employers, etc., made up fifty-two per cent.; while the professional class was represented by only three per cent. The plan followed was to distribute the quotients in ranges of five, below ninety and above one hundred and ten which represents the average zone; take the three above-mentioned social classes and discover which class was most responsible for mental defect and retardation, and which contributed the highest percentage of bright and advanced pupils. The results found were quite significant. The professional class furnished no mental defectives at all and no retardation below 80 I.Q.; nothing between 86 and 90, and only 2.6 per cent. between 81 and 85, which made an almost negligible quantity over the whole range. On the other hand, they furnished 15 per cent.—five times their proportionate share—of those between 121 and 125, and 29 per cent.—nearly ten times their share—of the brilliant quotients over 125.

The artisan class furnished less than their share of defect and retardation in every group with the exception of 81 to 85, and in the upper ranges of mentality they furnished more than their share, with the exception of the highest grade where their contribution was approximately normal.

The last class, however, furnished 50 per cent. more than their share to mental defect, and more to the other groups below 100, with the exception of the 81-85 class; and in the upper grades of mentality, their contribution was always less than their share, the difference amounting, at times, to 100 per cent.

The results show conclusively the effect of social status upon intelligence; whether the grounds are hereditary or environmental, or to some extent both, is another problem needing more data for discussion.

#### MALNUTRITION AND RETARDATION.

The estimates in this comparison were based upon the chart for average height and weight measurements issued by the Department



of Public Health, Toronto (Division of Child Hygiene), and used at the Nutrition Clinic of the Hospital for Sick Children. This chart was compiled, for the earlier years, from records made by Dr. L. E. Holt.\* The school age figures were taken from the investigations of Boas, Burk, Bowditch, Porter, Emerson, Manny and others who undertook to mass the returns from the largest cities of the United States, in addition to "results made by the Metropolitan Life Insurance Company in their study of candidates for marking papers, and those of Greenwood which includes 350,000 measurements of English school children."†

Very little investigation has been carried out with respect to the relation between malnutrition and the distribution of intelligence. One important survey, however, was written up by Smiley Blanton, M.D., of the U. S. Army, on "Mental and Nervous Changes in the Children of the Volksschulen of Thier, Germany, Caused by Malnutrition" (*Mental Hygiene, July, 1919*). Over six thousand children between five and a half and fourteen years of age were examined. It was found that forty per cent. of the children suffered "from malnutrition to such a degree as to cause a loss of nervous energy." But not more "than five per cent. of the total school population had suffered injury to the nervous system such as to affect the intelligence permanently." This reduced percentage did not include children of superior stock and intelligence. Such children withstood the strain successfully. "Their school work dropped off because they did not have the nervous energy to keep going all during the day. But the mental abilities of these same children in the morning while they were fresh was apparently as good as ever." It was upon the lower levels that malnutrition had its greatest effect. "The feeble-minded, the border-line defectives and those classed as dull, were affected and often permanently so by malnutrition of even a moderate severity. The feeble-minded drop to lower levels of intelligence. The border-line defectives became like the definitely feeble-minded, and the normally dull children became like border-line defectives."

Valuable as these conclusions are, nevertheless, the question as to the connection between malnutrition and feeble-mindedness remains somewhat obscure. As a medical and biological problem it lies outside the scope of this report. It is, however, fairly well conceded that, although under-nourishment might and does account

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\*"Diseases of Infancy and Childhood" (1917) p. 20.

†William R. P. Emerson, M.D., and Frank A. Manny, "Weight and Height in Relation to Malnutrition." *Archives of Pediatrics*, August, 1920.

B. T. Baldwin: "Physical Growth and School Progress." U. S. A. Bureau of Education, 1914.

for some retardation in the intellectual alertness of a child, yet the bearing of malnutrition upon definite mental defect does not necessarily stand as a relation of cause and effect. The former factor may be a concomitant to be explained absolutely on other grounds.

The findings in this present survey do indeed show that 75% of the children with an I.Q. of less than 70 were mal-nourished (that is, with ten per cent. or more of underweight), yet the small number of individuals in such a class is too limited a result upon which to generalize.

A glance at the other ranges will indicate that malnutrition is somewhat more prevalent amongst children with the lower intelligence level. That it is not constant may be seen by the fact that the children between 81 and 90 I.Q. show less of it than those between 101 and 110, while those between 91 and 100 do not differ from the higher ranges. The general impression formed by massing the results was that the real cause of defect, retardation, and acceleration must be sought elsewhere. The average Intelligence-Quotient for all those children of the school who were normal in weight, together with those who were overweight, was 101, while for those who were undernourished it was 98—a comparatively negligible difference.

| Intelligence<br>Quotient. | Percentage<br>undernourished. |
|---------------------------|-------------------------------|
| 70 and below              | 75                            |
| 71-80                     | 31                            |
| 81-90                     | 25.5                          |
| 91-100                    | 23.4                          |
| 101-110                   | 27.5                          |
| 111-120                   | 23.3                          |
| 121 and over              | 23.8                          |

As soon as the psychological examination was completed, an additional survey from the psychiatric standpoint was made by Dr. C. K. Clarke, Medical Director of the Canadian National Committee for Mental Hygiene. Two groups of children received special attention—those who were low in the intelligence scale, and those whose quotients ran over 125. An inspection of the nine cases below 75 I.Q. will show how closely connected are low grades of intelligence with physical stigmata and volitional aberrations.

#### THE GROUP BELOW 75 I.Q.

A. D. Age 7 years, 6 months. I.Q. 53; in Junior First. Teacher says "she does not learn anything though she comes regularly to school." Very defective palate; strabismus in left eye; stolid ex-



pressionless face; participation in school exercises, mechanical and imitative.

C. S. Age 14 years, 10 months. I.Q. 60, in Junior Third. "Does things by fits and starts." Defective palate; no advance in class though school attendance is good. Wretched home conditions.

B. S. Age 14 years, 11 months. I.Q. 70, in Junior Third. Tall, anaemic, cyanosis; was for some time in open air school; mother tubercular; depressing home life; school attendance good.

F. A. Age 11 years, 11 months. I.Q. 70, in Senior Third. Anaemic; nasal trouble, poor vision; inert, weak-willed; depressing home life. School attendance good.

H. A. Age 15 years, 2 months. I.Q. 70, in Senior Third. Glandular trouble.

D. H. Age 10 years, 1 month. I.Q. 74, in Senior Third. Anaemic; defective speech and vision; inert, weak-willed; good school attendance.

E. H. Age 14 years, 2 months. I.Q. 74, in Junior Third. Defective palate; heavy, lethargic face; lazy.

S. A. Age 8 years, 6 months. I.Q. 73, in Senior First. Defective palate; right eye blind; backward developmental history; baby ways; stubborn; home conditions fair.

An interesting family group are illustrated in the following four cases—three brothers and one sister.

B. L. Age 8 years, 1 month. I.Q. 78, in Junior First. Very narrow forehead; silly grin; baby ways; defective speech; home conditions somewhat below average.

F. L. Age 11 years. I.Q. 77, in Junior Second. Same type of forehead as B. L. Silly grin; defective palate; puts fingers in mouth with head tilted childishly to one side while answering question; very slow.

T. L. Age 12 years, 9 months. I.Q. 85, in Junior Third. Dull.

S. L. Age 9 years, 4 months. I.Q. 89, in Junior Second. Lethargic face; speaks in drawl.

On the other hand, it would be interesting to compare this list with the second group examined.

#### THE GROUP ABOVE 125 I.Q.

P. A. Age 6 years, 5 months. I.Q. 143, in Senior First. Exceptionally bright; fine imagination; brilliant in all class subjects; affectionate, trustworthy; healthy; a very fine type of boy; good home.

W. A. Age 8 years, 10 months. I.Q. 138, in Senior Third. Bright, healthy boy, doing excellent class work; fond of outdoor games.

W. B. Age 6 years, 9 months. I.Q. 137, in Junior First. Defective palate; "a bit restless"; good school attendance.

S. H. Age 12 years, 6 months. I.Q. 133, in Senior Fourth; alert, good attendance; good reasoning ability; reliable; healthy.

T. A. Age 11 years, 5 months. I.Q. 134, in Junior Fourth. Very intelligent; good attendance; well behaved.

C. H. Age 7 years, 5 months. I.Q. 130, in Junior Second. Defective palate; cyanosis; impulsive; good home conditions.

S. B. Age 8 years. I.Q. 128, in Junior Second; defective palate.

D. K. Age 7 years, 8 months. I.Q. 128, in Senior Fourth. Alert; industrious; good habits.

All of the children in this class were forging ahead in their work without undue strain, and were, with a very few exceptions, healthy and vigorous and very much alert on the playground. Anyone could see that leadership in industrial and professional life lay strongly embedded in such promising types.

#### A SPECIAL CASE.

P. H. A case of extraordinary precocity. This boy was only 7 years, 5 months old, but had the surprising vocabulary of over 8,000 words, equal to the average accomplishment of a boy of 13 years of age. A few of his definitions may be given:

Civil—polite.

Sportive—fond of play.

Skill—you can do things well if you have skill.

Dungeon—a cellar in the King's palace where they put prisoners.

Peculiarity—when anything is odd.

The 12th year group of tests were all passed with the exception of the reversing of the digits. The abstract terms were made clear not only by definition but by illustration. "Taking a man to court and sentencing him without a trial would be unjust." The ball and field test resulted in a fine spiral drawn from the gate. The dissected sentences were put in order almost as soon as they were seen, and each one of the five questions calling for similarities was satisfactorily answered.

In the 14th year group, two of the six questions were answered: "The doctor came to the neighbour's home to try to make him well, the lawyer came to draw up his will which looked like the man was



going to die, and the minister came to pray and have service." The third part was answered incorrectly for an instant: "The man was riding astride a waggon." This was immediately changed to the correct reply—"a bicycle."

It was probably in the fable tests where his responses were most brilliant. Every answer showed not only a facility in seeing the point of the story, but a capacity for generalization far beyond his years. He received an actual score of ten—the maximum credit—when eight would have been sufficient for a pass in this 15th year test. This was indeed the only test he passed in the average adult group, but by the time the examination was over he had actually climbed up to an Intelligence Quotient of 173—a score without a parallel in any of the schools examined up to date. The boy comes from a fine home, is well-mannered, affectionate and is on good terms with his playmates. He possesses, however, poor vision and other physical defects. Such a remarkable case of precocity stands in just as much need of special observation and care, as one which shows a proportionate difference below the median line of intelligence.

#### AIM OF SURVEY.

The final aim of the survey was, as already stated, to obtain a body of results which might be useful in following up history over a period of years.

As standardization in the field of mental tests is a comparatively recent development in psychology, there has not been much opportunity to study side by side, in statistical form, the industrial records of adults with the mental co-efficients of the same persons as children attending the public schools. A comparative inquiry into such results would be a factor, not only in increasing the efficiency of school methods, but also in determining to some extent the selection of trades and professions, and would affect, reciprocally the tests themselves.

This, obviously, would be a much more extended objective, but a vital one if intelligence scales are to be placed on a wide practical basis and to be accorded a valuable social function.

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# The Relation of the Canadian National Council for Combating Venereal Diseases to the Programme of Venereal Disease Control

BY DR. GORDON BATES.

Read at the annual meeting of the Canadian Public Health Association,  
Vancouver, B.C., June 21st, 1921.

THE Canadian National Council for Combating Venereal Diseases is a voluntary body organized in May, 1919, at a conference called to discuss ways and means of attacking the venereal disease problem. This conference was held under the auspices of the Dominion Government, and the plan for which subsequently evolved included the National Council as part of its machinery.

This was a logical idea. As is well known, both in Great Britain and in the United States, the principle of recognition of the importance of national health promoting voluntary agencies as a means of assisting in the carrying out of government plans and of carrying on pioneer work independently has been recognized. One need only refer to the work of the American Social Hygiene Association particularly during the war, and to the spade work undertaken by the National Council for Combating Venereal Diseases in Great Britain to provide concrete examples of this fact. Both of these organizations are of a voluntary character and are national in their scope although the work undertaken by each is somewhat different. The British organization has felt that the best results can be achieved by centralizing on a direct frontal attack on the venereal disease question itself. Great efforts have been made to educate the public generally as to the character and dangers of venereal diseases as well as to stimulate various agencies which may do their part either from the standpoint of education or treatment.

Education has not been confined to the imparting of knowledge as to the physical results of venereal disease, but every effort has been made to go as far beyond this as possible in the inculcation of the view that correct moral standards are fundamental in all classes of society if the venereal disease problem is to be solved. All of this work has run parallel with governmental activities in the direction of providing facilities for the free treatment of venereal diseases.

The work of the American Social Hygiene Association has been planned along somewhat broader lines, and although considerable emphasis has been placed on the obvious immediate necessities of



the situation in the direction of education and treatment, the fact is recognized that the basic causes for the existence of the problem are intimately associated with the causes of prostitution, and that they are essentially social in their nature.

This conception implies that problems must be studied and dealt with which at first sight seem to be only remotely connected with the problem immediately before us—that of the eradication of venereal diseases from the community. Such problems have to do for instance with the education of the child, the provision of reasonable recreational facilities for all parts of the community and the study of all measures for the establishment of a normal sex life. The absolute repression of organized vice and methods for dealing with clandestine prostitution are connected with questions as to whether sex offenders are adequately and fairly dealt with in our police courts, jails and reformatories and the question as to whether our present methods for dealing with such cases are preventive in the best sense of the word. The relation of the feeble-minded question to that of social hygiene is an important one, while that of rehabilitation in the case particularly of sex offenders among women is considered worthy of the most careful study.

The American Social Hygiene Association believes that the conservation of the monogamic family offers the best social progress. It studies and supports broad, practical measures that will perpetuate the family as a social unit, so as to contribute in the largest way to the happiness and productivity of its individual measures, and to the best development of the human race.

On the positive side, its programme includes the encouragement of:

1. Sound sex education, beginning with children in the home, and continuing in appropriate degrees and ways with adolescents, persons about to marry, parents; and, indeed, with all citizens.

2. Early, carefully considered marriages, recognized by the State (including abolition of common law marriages).

3. Recognition that children are, in the last analysis, the only real wealth of the nation; and such changes, in public sentiment and in social and economic organizations, as will make it possible for young married people more generally to enjoy the satisfaction of normal family life.

4. Provision of abundant, wholesome recreation for everyone, as an essential factor in social hygiene.

In addition to constructive policies such as the foregoing social hygiene at the present time requires that certain negative measures be pushed, and this Association has played and will continue to

play an important part in dealing with emergent pathological conditions that prevent the normal functioning of the family. It stands particularly for:

1. Repression of prostitution, with equal justice for men and women in the enforcement of law, and with particular regard to the protection of the young and inexperienced.

2. Combating venereal diseases, not only by the entire constructive programme of social hygiene, but by appropriate medical measures aimed directly at preventing the spread of infection, and at curing persons already infected. The Association recognizes, however, that the best check to the spread of infection is continence outside of marriage, and will not support any medical measure that tends to cause deviations from this important standard of conduct.

3. Segregation of defectives, delinquents, and degenerates, either with appropriate education until they are sufficiently rehabilitated to be restored to society, or, when necessary, for life-long custodial care.

It is hoped that the Canadian National Council for Combating Venereal Diseases will be able to incorporate in its programme the best to be found in the work of both the American Social Hygiene Association and the British National Council. Because of its relation to the already existing plan by which the Dominion and Provincial Governments have joined forces in a Dominion-wide treatment scheme, the idea of duplicating the type of educational work carried on by the British National Council should be easily carried out. In addition, however, if we are to progress with any degree of rapidity various types of investigation should be initiated with a view to arriving at a complete understanding of the whole problem and to an ultimate solution of the various social problems evolved.

The formal aims and objects of the Canadian National Council for Combating Venereal Diseases as at present constituted are as follows:

1. To combat venereal diseases by whatever means seem desirable.

2. To encourage and assist in the dissemination of a sound knowledge of the physiological and moral laws of life in order to raise the standard both of health and conduct.

3. To co-operate with existing associations, to seek their approval and support, and to give advice when desired in order to provide the constituent social measures which are basic in the solution of this problem.



4. To promote such legislative, social and administrative reforms as are relevant to the foregoing aims and objects.

5. To provide accurate and enlightened information as to the prevalence of these diseases, and as to the necessity for early treatment.

6. To promote the provision of greater facilities for their treatment.

7. To increase the opportunities of medical students, practitioners, and trained nurses for the study of these diseases.

8. Inasmuch as the conference at which the decision to organize this Council was made was called by the Government of Canada, this Council should hold itself ready to render such service and assistance to the Government as it may from time to time require.

The Council (if certain suggestions to be considered by the annual meeting are approved) will consist of active members who pay an annual membership fee of two dollars. Between annual meetings the business of the Council will be carried on by an Executive consisting of the President, Vice-Presidents, Treasurer, Secretary and a Board, the members of which are elected from the various provinces. All executive members hold office yearly, and are elected at the annual meeting of the Council.

The affairs of the Council in each province will be carried on by a provincial committee, the chairman of which is also a member of the National Executive. Each provincial executive is elected annually by the members of the National Council residing in the particular province in question. A similar arrangement should be carried out in the case of municipal committees where such are found.

#### THE DUTIES OF THE CANADIAN NATIONAL COUNCIL FOR COMBATING VENEREAL DISEASES.

It should be understood from the outset that the Canadian National Council for Combating Venereal Diseases is clearly in the class of voluntary organizations. A recognition of this fact is essential to the success of the Council's work. The functions of official government bodies and of voluntary organizations are separate and distinct from one another, and should be kept so. Either official body or voluntary organization may undertake activities which may be mutually embarrassing if this is not understood.

Generally speaking, it is a mistake for a government official in charge of a particular piece of work to be also in charge as chairman of a voluntary body which is either assisting in the carrying out of that work or urging that it be done. The difficulties of such

a situation are perhaps sufficiently obvious. Indeed, in the present instance I would go so far as to suggest that where chief officers of health are acting as temporary provincial chairmen for the Canadian National Council for Combating Venereal Diseases every effort should be made to procure a permanent independent chairman at the earliest possible date.

The first duty of the Canadian National Council for Combating Venereal Diseases, however, will be to help make effective the general government plans (Dominion and Provincial) for combating venereal diseases. The best means for achieving this end will be for the Council to undertake general educational work on as large a scale as possible. The facts as to the seriousness of venereal diseases and as to their prevalence should be put before people generally as soon as possible. The fact that clinics are being established and that the various governments, Dominion and Provincial, propose to deal with the situation at once should also be made known. This is the immediate duty of the National Council.

Such work may be accomplished by the use of speakers in the store and factory, the moving picture and the pamphlet, the advertisement. Such work for the whole country will be readily accomplished particularly as our provincial and municipal committees complete organization.

Other work which must be undertaken is suggested by various problems which rise to meet us as soon as we commence to make a survey of the situation. For instance, although we now have venereal disease legislation in most of the provinces, much of it is not enforced. For example, remedies for the cure of venereal diseases are still on sale in many places notwithstanding the existence of prohibitive legislation. Quack remedies are not infrequently advertised in magazines and newspapers. Again it is perfectly obvious that physicians are not reporting cases as they should. In addition to the non-enforcement of existing legislation concerning venereal diseases other types of legislation dealing with sex offenders are either not enforced or non-existent. Where they exist discrimination against women is notoriously common. Legislation in respect to the adequate supervision of boarding houses is another type of legislation which is badly needed. The study of such problems should be the duty of law enforcement sub-committees of the National Council wherever branches of the Council are formed.

The matter of education of the young should also be carefully studied in order that we may come to valuable conclusions as to what is to be done in regard to this much discussed problem. The problem of protective work for girls is one which is forced upon us



by the large numbers of girls employed in various industries. A large employer of labour in Toronto told me the other day for instance that 60% of the young women in his employ live alone in boarding houses. The study of such a problem should be the duty of a special committee. So much in a general way for the work to be undertaken by the National Council, and its various local committees. Such work should be co-ordinated as much as possible and the work of each local committee made available for all others.

It is hoped that as this work progresses the work of the headquarters office of the National Council will increase in scope and importance. It is planned to organize departments of propaganda and education, law enforcement and social investigation, and a medical department in the near future. A social worker will commence investigations in jails and police courts under the general direction of the latter department early in the fall. The necessity of the former two departments is perhaps sufficiently obvious. The duties of the Medical Department should include early surveys as to the amount of syphilis and gonorrhoea in various parts of the country. The education and propaganda department will undertake to widen the scope of the educational work undertaken. In this connection the National Council has made arrangements for the distribution in Canada of all material issued by the American Social Hygiene Association consisting of many types of pamphlets, card exhibits, lantern slides and moving pictures. Application for such material should be made to the National Council. It is hoped that a similar arrangement may be entered into with the British National Council whereby material produced by that organization may be procured in a similar way. All of this, of course, will be in addition to Canadian material which is in process of preparation. Of particular interest in connection with the educational material procured through the American Social Hygiene Association is a series of moving pictures on various phases of the venereal disease question and adapted to the uses of various types of audience. These include films, dealing with the following subjects:

1. Diagnosis and treatment of syphilis.
2. Diagnosis and treatment of gonorrhoea.
3. Lecture film for women.
4. The End of the Road.
5. Lecture film for men.

During the first six months of its existence the National Council has been quietly organizing and undertaking necessary preliminary

spade work. At the present moment Nova Scotia, Ontario, Manitoba and Saskatchewan have organized provincial committees, while in Ontario four municipal committees have commenced work well. Considerable literature has been distributed in various places as well while the utilization of the propaganda film "The End of the Road," has meant that in a space of less than three months 200,000 people in various parts of Canada have viewed the film and learned a great deal not only as to the seriousness, prevalence and social causes of venereal diseases, but also of government plans. The picture will be shown to many more audiences before its work is completed.

In this paper I have touched in but a brief summarial way with the work which has been undertaken or will be undertaken by the Canadian National Council for Combating Venereal Diseases. The Council aims to become one of the great national voluntary organizations in Canada. May I suggest that public health plans will never completely succeed until an organized and educated public opinion is solidly behind them. The greater the membership the greater the financial support given to the Council, and the more widespread its organization the stronger public opinion will be. It seems to me that one of the great objects of public health workers should be to work with the ideal of enlisting as far as is humanly possible every citizen of the country in the fight for better living conditions and better health. This will be the ideal of the Canadian National Council for Combating Venereal Diseases in so far as the particular problems which lie within the purview of the Council are concerned. May I ask that you recognize the importance of its work and its scope. Duplication of effort should be avoided in all cases. The fullest degree of co-operation and co-ordination are essential.

Given these—with the National Council occupying its proper place in the general programme of attack—and no more and no less than its proper place, we have a definite and valuable piece of machinery added to our equipment. Its utilization will mean, I know, a more thorough dealing with the subject now, but the accomplishment of much pioneer work which will be unnecessarily difficult without the help of this new organization. Upon the carrying out of such advance guard work depends the ultimate solution not only of the greatest of our public health problems, but also the making of decisions on matters even more intimately concerned with the health and happiness of the average citizen.



# The Victorian Order of Nurses

## THE PUBLIC HEALTH NURSE AS AN ORGANIZER IN THE RURAL COMMUNITY.

BY JESSIE FORSHAW, V.O.N.

THE public health nurse has become an established fact in most of the cities of Canada, and her usefulness and efficiency is in proportion to the perfection of the organization to which she is attached, the co-ordination between it and the local health authorities, and other organizations interested in community work. Nursing service under these conditions is organized without difficulty.

In rural communities we have an entirely different situation to face. The people demand such service and finance it themselves. The local medical men are sympathetic, though in most cases their acquaintance with it has not been obtained from practical experience. Success of rural nursing service depends on the organizing ability and tact of the nurse herself. She has a double duty to perform—to evolve a system whereby she can best meet the needs of the individual community along the lines of remedial and preventative work, and to educate the public mind into the right attitude toward such a service and their duty to it. It is no longer possible for lay people to direct the activities of the nurse.

It is necessary to deal with the mental and spiritual equipment of the nurse herself. She must have a ripe experience in her work and in the handling of the human equation. She must have a clear head, a stout heart and great patience, and then, behold! we have what is known as a Missionary. And the missionary must be the very pick of her kind if she is to succeed in her mission field. So keep your young apostles of good health to develop and ripen in the cities, and to the rural communities send the finished workers. It is felt that the most efficient women are needed in the cities. Not so, because there there are trained medical men and a thousand and one organizations, lay and professional, ready to provide assistance. In the rural communities there are no organizations whose purpose it is to be responsible definitely for the health of the people in the community.

The Boards of Health in time past were organized to meet that need. They have more or less failed because of the lack of trained workers. The coming of the public health nurse will not interfere with the work of the local Boards of Health, but will revive and support them, so that they may carry out the work they were originally intended to do.

The nurse called in by the family for such service as they know she has to give is at once in a position to advise and instruct. The prevention of negative health conditions will ultimately lead to the elimination of the problem of meeting the overwhelming problem of curative work as we have it to-day. Though these communities will open their arms to the nurse at her coming because of her bedside ministrations, when it comes to educational and preventative work, her difficulties will begin.

There is a curious tradition amongst our people that because a child lives in the country it must be healthy in mind and body. The trained worker knows that the country child is physically below the standard of his little brother or sister in the city.

One of the first things the nurse in the rural community comes up against is the question of diet, therefore she must have a good knowledge of dietetics as applied to home life, and in connection with the ability of the family to obtain suitable variety of food for the growing child.

The schools in many cases have not had inspection, or if they have the provincial school nurses have not had the time to follow up their their work to see that the parents are doing their part. Soon a close co-operation between the travelling provincial school nurse and the public health nurse who will of necessity do the follow-up work and the general supervisory school inspection work, will exist. If she does this she is a great support to the provincial authorities who are striving to cover this field.

Perhaps one of the most valuable services she can perform is in connection with infectious diseases. In this she can be of the greatest assistance to the Boards of Health, seeing that the quarantine regulations are being carried out, being responsible for the care of the patients, instructing the family or whoever is in charge so that the proper care will be given, and in many cases going in to closely supervise the work herself. The nurse who has had training in modern methods of nursing contagious diseases can do this with perfect safety to the rest of the community. The little folk must be most carefully watched, for often the diseases of childhood are looked on very lightly in the country, and as "something



the children have to have." Many children are handicapped for life for lack of follow up care after these attacks.

Of course, the great outstanding, ever-present need is the care of the women in childbirth. Sir Arthur Newsholme says: "The safe delivery of a woman in childbirth is a matter of national importance." In many of our western communities the medical man is at a great distance, and it is necessary to have a nurse who has had such a complete training in obstetrics that if the occasion requires it she can successfully deliver a woman. In this way this very important vocation need no longer be left in the hands of untrained people. No nurse wants to take this work up where it is not a necessity. Few women in the rural communities ever received prenatal care except free advice from every other woman in the settlement. She frequently accepts all that is given her. Many a tragedy might be prevented if she were cared for during pregnancy.

Another heavy responsibility the public health nurse must take upon her shoulders is to recognize a difficult or abnormal case in time to get the mother to a hospital or to obtain the services of a physician at any cost of time or money. She should be the person to decide whether the mother will stay at home or go to some institution.

On the outskirts of every community in the country there are always a certain number of struggling, forlorn individuals either living together in inefficient homes or under more adverse conditions, men, women and children who are usually below the normal mental standard. The community having grown tired of supporting them describes them as "lazy" or "immoral" or "dead beats," and they are left alone to find their way to complete degeneracy. It is to this unhappy group that the nurse comes as a sort of a saviour. She has a knowledge of mental hygiene, and she knows that such people cannot be judged by the same standards either physically, morally or mentally, as the rest of the community, and she shows to these people a new light and to the community a fresh sense of their responsibility to these younger brothers and sisters.

The necessity of a comprehensive and practical course in public health nursing in addition to the groundwork of the hospital training is very evident. The nurse must be familiar with every specialty of public health work, for while one or two specialities might be all she required for work in a town or city, in a rural community she must have an understanding of all. It is perhaps the most fruitful field of service in Canada to-day.

The public health nurse in the rural community must have the training and ability which fits her to organize and administer a

modern community nursing service. It is the responsibility of the community to see that her surroundings are as comfortable as it is possible to make them, that she is given a free hand to adapt her ministrations to the local needs, free from individual and local prejudices. Financial provision must be made for her salary, transportation, etc., but, above all, must she have the spiritual support of those to whom she is to minister if she is to face the perplexing problems as the apostle of health in a rural community.

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### PUBLIC HEALTH NURSING ON THE PRAIRIE.

I am returning the questionnaire filled in but I am afraid it does not touch my work very much.

My district includes nine townships, there is no railway and no town in the whole municipality except on the last quarter section in the north-east corner. The railway came last year and a town is gradually springing up, no doctor lives in the district.

My work is mostly nursing in the homes; like private nursing the people pay two dollars a day for the nurse; because there is only one nurse I have the right to choose between two cases; if I get two calls, I take the case that needs the nurse the most; but this is not often necessary. Sometimes I can take two cases together, but not often, the farms are so far apart. Occasionally I have taken a case out of the district and the people then pay full nursing fees. This is not very satisfactory, as the outside cases are usually urgent and if I get a district call I have to leave the patient I am with.

So much for the general nursing. In the homes I often do little things for other members of the family, besides the actual patient; or often advice is given in the home. Also, apart from nursing I have to help with the cooking and housework, I object to washing except the babies' or patient's clothes.

Sometimes I get a call to see a patient; the person is sick, but the people are not decided whether to get a doctor or not, so the nurse is called to advise as to the necessity of securing medical advice, which has to be brought from a distance.

Advice is also often given over the phone. One half of the district is on a different phone line and from another central, or this form of using the nurse would be more frequent.

The Medical Officer for the district has not made a school inspection since I came; he made one of all the schools with the last nurse, and that will be nearly two years ago. I am very seldom



in touch with the medical officer not nearly so often as with one or two of the other doctors. I know from the last school inspection quite a number of children were operated on for tonsils or other ailments.

In a district like this there seems to be no opportunity for arranging educational work in the way of getting the people together; the work is so scattered; the people do appreciate the nurse; and in gaining their confidence one can help them in many ways.

The most public work I have done was during the small-pox epidemic. Nothing was being done until I advised the Council of the fact that the disease was actually in the district. The Medical Officer was called out, and I went with him to visit all the homes of children attending one school. He quarantined five families that afternoon. I was called to a maternity case, so the small-pox work went along without me for a little while; except perhaps that the phone seemed to be ringing all day for advice from the nurse. The Council kept me for other work so that I should not be quarantined with the patients, later on I did quite a lot of re-vaccinations and helped to fumigate the houses after inspecting the whole family to make sure the rash had entirely disappeared.

There is so much that could not possibly be shown in report sheets. The case I am with at present is pneumonia, complicated with pleurisy and septic condition of the blood; five whole days and nights I stayed with him; there was no one else to do it; these last three nights I have gone to bed and gotten up several times to give him medicine, etc. Not all the cases are as hard as this one, but when one is on the go from one case to another for a few weeks one gets tired out.

Anyway, a nurse's work is to serve, for "he that would be greatest among you, let him serve."

I am afraid this letter will not be very interesting, you know the daily round of the prairie nurse perhaps better than I do, so I must apologize if it bores you. I wrote because all the answers to your questions except one was "no," and it looked rather bad for a V. O. Nurse.

Wishing the V. O. N. every success in all its various work,

Yours sincerely,

"MABEL SHEPHARD," V. O. N.

In one of the municipalities of a Prairie Province the rate-payers gathered together to discuss the advisability of continuing

the payment of the salary of the municipal nurse from the municipal treasury and thereby increasing the rates. This important discussion lasted well into the afternoon, and as the gathering was a large and representative one they decided they would make a day of it and end up with a dance. One of the members was despatched to put up a notice at the hall. When this was prepared and placed in a prominent position it read "Farmers' Bawl Here To-night."

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# Social Background

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## CHILD PROTECTION AND HOME FINDING.

BY MR. C. C. CARSTENS,

Director, Child Welfare League of America.

The work of a Children's Aid Society is two-fold:

(1) *Child Protection*—which involves the creating of a desirable environment for the child in its own home.

(2) *Child Aid*—which consists of finding a new home, affording just the right setting for the child, in the event of the natural home being found entirely unsuitable.

1. The outstanding services a children's protective agency may render are nine in number:

### 1. *Protection from physical neglect.*

This is apart from medical neglect or concern for sex standards. The number of this type of problem is by all means the largest, although Prohibition has resulted in a considerable reduction.

Family "A" present a good illustration of this problem. Father, mother and four children constitute the family group. Man a paperhanger, splendid workman, when sober, and capable of earning a good wage. Woman slovenly in appearance and shiftless. Home dirty, ill-kept, but not actually poverty-stricken, a rendezvous for people worse than themselves. It was finally decided that things had gotten to such a pass that the children ought to be removed. For several months previous we had tried without success to arouse the ambition of the couple. That was probably ten years ago; now I should deal with the problem quite differently. I should move heaven and earth to have the woman's mental condition examined, which would probably result in having her diagnosed as a moron. Her low mentality was probably responsible, at least indirectly, for the man taking to drink. That, of course, would be difficult to prove. But at that time no psychopatic interest was shown in ordinary case work.

### 2. *Medical or Surgical Neglect.*

One day a family of foreign extraction was brought to my notice. The children were born in America. The eldest was a six-year child who was unable to walk.

One child had died of neglect. The six-year-old spent most

of its time squatting on the floor, and things had gotten to the point where the family did not seem to care whether it walked or not. Something clearly had to be done. They were Syrians, with no idea of Anglo-Saxon standards. They thought of their children as possessions, and bluntly told us so. Our visitor was rather shocked at this attitude and talked the matter over with a Syrian merchant in the neighbourhood, whose viewpoint proved to be similar to the family's. Finally, after a good deal of thought, we asked the court whether it would not take the responsibility of removing the child from the home, since the family were not willing for the child to have the medical care necessary. This was done, notwithstanding the fact that the family's viewpoint was presented by a lawyer engaged by the Syrian merchant above mentioned. The child was committed to the state department and through them admitted to the hospital, where eventually its legs were straightened. This action aroused the family, and a good deal happened in the colony after public opinion bestirred itself. The Syrian merchant translated many American laws into Arabic that the community might understand standards they must observe. This led indirectly to the better care of many children. Six months later the child was returned to the parents, just beginning to walk—its legs straight.

### 3. *Neglect of Sex Standards.*

One day a representative came into my office from one of the largest Baptist Churches in Boston and showed me a letter she had received from a young Chinese girl. This girl said that she was very unhappy at home and asked that this friend, a former Sunday School teacher, help her to leave home because her father had threatened her, and while she was troubled about leaving the rest of the children, she felt, for her own protection, she must go. The church worker puzzled, had brought the matter to us. I sent one of our most experienced women to see the girl, making an appointment at a neighbour's house. The girl was about 15 years of age, and in the third form at high school. She, being the eldest, had been for a time out of school, through her mother's confinement. The father, a rich Chinaman, has several laundries, also a good deal of property.

The girl had meanwhile, even before our visit, sent a second letter to the Sunday School teacher, regretting that she had written mentioning the affair, and asking her not to do anything. We then had to tell the teacher that that was not the way we did our job in the community, i.e., that it could be done or withdrawn, that certainly our responsibility did not end until we had done every-



thing possible to protect this girl. Our visitor, who found her an attractive, intelligent young Chinese girl, said to her: "Just as soon as you feel that you want to leave—she was reluctant to leave her mother and the children—we will co-operate with you and are ready to do all we can for you." It was not more than five days before she wrote that she would like to see the visitor again. To her she related how her father had again attempted to entice her into immoral relations with him. She felt she could not endure the strain any longer. We felt sure we had the evidence, and so we succeeded in getting hold of the lawyer who represented her father's interests, and he believed that we were right and that the girl had told the truth. He persuaded the father to consent to having a representative of a Children's Aid Society become a guardian of the girl. They immediately proceeded to look for a suitable home for her, and succeeded in finding the right type of family—one where the environment was just the kind desired and where she could complete her education. The mother had lived in China as a missionary for six or eight years and could speak the Chinese language, and had a thorough understanding of their racial characteristics. This woman became the guardian of the girl which meant that she had complete control of her interests as well as the custody of her ward. The girl is now at one of the boarding schools, but not cut off from her mother, who goes to see her. The family tie is maintained just as far as possible. This girl is now training to go to China as a missionary.

4. *Protection from the dependence that is caused by non-support of wife and children.*

While there are agencies in all our communities that provide thoughtless and easy money—without case work as a rule, but sometimes with case work—a good children's protective agency can, and does, work to prevent dependence, realizing that the spirit of independence is the greatest safeguard for the family's virtues. Even the widow of good character, bringing up children with the aid of mothers' allowances, has a greater struggle to bring up her children into decency and education and all those elements in training for community life, than the one who stands entirely independent.

5. *Maintenance of the child born out of wedlock.*

I personally am not in favour of enforcing maintenance proceedings in every case of illegitimacy, but I am very much in favour of considering in every case its possibility.

In many cases of illegitimacy, I believe, it is desirable to go no further than to have an acknowledgment of paternity on the part of the father of the child. In many cases I would, of course, want to go further. Our social stigma in the community is so deeply rooted that we sometimes make it harder for the girl by bringing the matter into the open court. And the laws that are being passed at the present time by some of the States—and there is a suggestion of it in the statute being considered here—attempting to force the mother in every case to tell the name of the child's father, then bringing it into the public view, is not good social work. When the father is known, to have an acknowledgment of paternity is, of course, most desirable.

6. *Protection of other moral standards.*

This involves protection against contact with the use of drugs, gambling, etc., to which, unfortunately, our courts and public bodies are not very sensitive. We know that they are indeed destructive of the morality of children as well as adults.

7. *Providing Special Care.*

A family living in one of the hill towns of Massachusetts, west of the Connecticut River, will serve to illustrate this point. The family consists of father, mother, and three children, the eldest a boy of nine, crippled by paralysis in early childhood. He was a bright boy, and when he got old enough he was as anxious as any of them to go to school. In winter, when weather permitted, his six-year-old brother used to draw him on a sleigh to the schoolhouse, a distance of three-quarters of a mile. But when the weather was bad, and during the other seasons when there was no sleighing, he could not go to school very often. Because of ignorance the family did not know that the state provided a splendid institution, where they would provide three things: (1) All the medical care that science can provide. (2) All the education of which their minds were capable. (3) Instruction in handiwork which would make them self-supporting. Any not capable of self-support are discharged at the age of twenty-one and transferred, if necessary, to an almshouse. The family did not know of this institution, nor did their minister, although it had been in existence ten years. There is no cost in connection with it. We got the boy into the institution, arranging for the minister to take him there, after having persuaded the family that it was for the best.

8. *Dealing with the Protection of the Delinquent.*

This does not mean the discipline of the delinquent, which is



not our job. It is my judgment that the protection of the delinquent is more important in many instances than the discipline. More than half of these delinquency cases originate in families that are below grade, and if that is the case, then the child has generally not had a square deal. And it is no more than fair that every child should first have a square deal to show what response he will make to a good home before he is placed in an institution. If he does not make the right response he should then be committed. If he does respond he is protected from the levelling down process of every institution for delinquents, however good it is. The protection of the delinquent so that he may not get into contaminating associations, any may be saved from too close contact with his class, has saved many a delinquent. It has reduced our number of delinquents very much.

### 9. *Prevention of Cruelty.*

Two years ago we examined our cases and found that out of 6,500 cases only 6% were cruelty cases and 94% something else. In other words, the organization that was established with the name "The Society for the Prevention of Cruelty to Children" has during the forty years of its existence gradually re-shaped its plans and policies so that it is now dealing more with prevention of neglect than cruelty.

I have outlined in some detail the protection side. You can see how the children's aid side hitches on the finding of a new home. For a child that is deprived of the right of living with its own family, not a minimum but everything possible, should be done to make up for that loss, and that means a very fine adjustment.

The children's aid function utilizing both free and boarded homes is based upon a broader knowledge of the child's needs, and, therefore, what is needed for a good children's aid society is what might be called a preventive clinic, which has two elements in it:

(1) An aggressive study of the child's physical needs, so that everything possible physically may be done for the child.

(2) The mechanism for a personality study. A thorough psychologist is essential, one who has a knowledge of case work.

The advice that is then given may be linked up with a remedy, just as with the social service department of a hospital. There was a time when hospital authorities would say to a patient: "You need milk and eggs and plenty of sleep," having no knowledge of the financial background. But when the social service departments came along and the doctors came to believe in them—there was

more sane advice given to the patient. So it is in personality study, in which physical treatment and mental treatment are linked up closely.

I have just been reading carefully an analysis of a young girl who had been in an institution for several years because of the death of her mother and the desertion of her father. This institution wanted to place her out in a family home, and they carelessly placed her with a good family—good family in the sense that the physical environment was fine—but it did not meet the girl's needs at all, because she had a peculiar mental complex. (For an interesting study along this line, I would refer you to an English book called "The Psychology of Insanity," by Hart). This girl's complex was that the whole world was against her. A second home was tried without better success, and altogether eight homes had been tried. Finally she was sent to this child study institution for a personality study, and there it was found that perhaps the controlling idea in the girl's mind was not the one that had been supposed, but that she had rather a mother complex. Her deceased mother was influencing her to do this, that and the other. The psychology of the situation was to so sublimate the mother's influence in the child's life, and instead of cutting it away, to make it a power in her life.

Good child placing work takes advantage of the advances which have been made in medical and psychological study, and in that way adjusts many more children into their right place. If we use all those social forces, the proportion of children to be removed from their parents will be in the inverse ratio to the effort that is made rather than in the direct ratio.

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# The Provincial Board of Health of Ontario

## COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF FEBRUARY, 1921.

### COMPARATIVE TABLE.

| Diseases.                      | Febry., 1921 |        | Febry., 1920 |        |
|--------------------------------|--------------|--------|--------------|--------|
|                                | Cases        | Deaths | Cases        | Deaths |
| Small-pox .....                | 867          | 5      | 883          | 9      |
| Scarlet Fever .....            | 622          | 15     | 646          | 24     |
| Diphtheria .....               | 565          | 59     | 551          | 84     |
| Measles .....                  | 395          | 8      | 1,623        | 36     |
| Whooping Cough .....           | 257          | 17     | 168          | 23     |
| Typhoid .....                  | 37           | 10     | 42           | 16     |
| Tuberculosis .....             | 194          | 147    | 201          | 183    |
| Infantile Paralysis .....      | .....        | .....  | 2            | 1      |
| Cerebro Spinal Meningitis..... | 12           | 12     | 13           | 10     |
| Influenza and Pneumonia.....   | 53           | 17     | 20,158       | 1,345  |
| Primary Pneumonia .....        | .....        | 374    | .....        | 970    |
|                                | 3,002        | 664    | 24,287       | 2,701  |

## VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR FEBRUARY, 1921.

| Diseases.        | Febry., 1921 | Febry., 1920 |
|------------------|--------------|--------------|
|                  | Cases        | Cases        |
| Syphilis .....   | 240          | 72           |
| Gonorrhoea ..... | 221          | 84           |
| Chancroid .....  | 8            | 2            |
|                  | 469          | 158          |

## SMALL-POX CASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF FEBRUARY, 1921.

| County Municipality      | Cases | Dths. | County Municipality       | Cases | Dths. |
|--------------------------|-------|-------|---------------------------|-------|-------|
| Algoma—Korah             | 10    | ..    | Nort'd. & D.—Bowmanville  | 4     | ..    |
| Tarbut                   | 1     | ..    | Brighton V.               | 1     | ..    |
| Jocelyn                  | 1     | ..    | Ontario—Oshawa            | 3     | ..    |
| Brant—Brantford          | 36    | ..    | Brock                     | 6     | ..    |
| Oakland                  | 6     | ..    | Parry Sound—Parry Sd. T.  | 8     | ..    |
| Bruce—Chesley            | 1     | ..    | So. Himsforth             | 1     | ..    |
| Carleton—Ottawa (5 wks.) | 287   | 1     | Paksley                   | 1     | ..    |
| Marlboro                 | 1     | ..    | Peterboro—Peterboro City  | 1     | ..    |
| Nepean                   | 45    | ..    | Prescott & R.—Clarance    | 4     | ..    |
| March                    | 1     | ..    | Cumberland                | 1     | ..    |
| Elgin—St. Thomas         | 37    | ..    | Pr. Edward—Ameliasburg    | 1     | ..    |
| So. Dorchester           | 4     | ..    | Wellington                | 1     | ..    |
| Bayham                   | 5     | ..    | Hillier                   | 1     | ..    |
| Dunnich                  | 1     | ..    | Sophiasburg               | 8     | ..    |
| Aylmer                   | 8     | ..    | Renfrew—Renfrew Town      | 1     | ..    |
| Essex—Essex Border       | 1     | ..    | Stafford                  | 5     | ..    |
| Frontenac—Kingston       | 2     | ..    | Adamston                  | 2     | ..    |
| Sterrington              | 1     | ..    | Rolph B. & W.             | 4     | ..    |
| Kingston Tp.             | 2     | ..    | Raglan                    | 3     | ..    |
| Grey—Sullivan Tp.        | 2     | ..    | Simcoe—Tossorontio        | 1     | ..    |
| Owen Sound               | 5     | ..    | Midland                   | 20    | ..    |
| Sarawak                  | 1     | ..    | Victoria Harbor           | 3     | 1     |
| Hanover                  | 6     | ..    | Tay                       | 2     | 1     |
| Hastings—Belleville      | 16    | ..    | Floss                     | 1     | ..    |
| Deseronto                | 10    | ..    | Penetanguishene           | 15    | ..    |
| Rawdon                   | 1     | ..    | Orillia Town              | 2     | ..    |
| Delaro                   | 1     | ..    | Orillia Tp.               | 8     | ..    |
| Trenton                  | 28    | ..    | Coldwater                 | 11    | ..    |
| Marmora Lake             | 1     | ..    | Innisfil                  | 8     | ..    |
| Kent—Chatham             | 4     | ..    | Stormont, D. & Glengarry— |       |       |
| Raleigh                  | 1     | ..    | Cornwall Town             | 1     | ..    |
| Lambton—Sarnia           | 2     | ..    | Finch                     | 1     | ..    |
| Brooke Tp.               | 15    | ..    | Roxboro                   | 4     | ..    |
| Bosanquet                | 1     | ..    | Locheil                   | 2     | ..    |
| Alvinston                | 10    | ..    | Sudbury—Sudbury Town      | 2     | ..    |
| Lennox & Addington—      |       |       | Champagne                 | 4     | ..    |
| N. Fredericksburg        | 1     | ..    | Copper Cliff              | 1     | ..    |
| Richmond                 | 5     | ..    | Hagar                     | 2     | ..    |
| Ernesttown               | 3     | ..    | Temiskaming—Elk Lake      | 1     | ..    |
| Camden                   | 1     | ..    | Matheson                  | 2     | ..    |
| Leeds & Grenville—       |       |       | Haileybury                | 10    | ..    |
| Bastern & Burgess        | 1     | ..    | Smooth Rock Falls         | 1     | ..    |
| Elizabethtown            | 1     | ..    | Charlton                  | 1     | ..    |
| Lincoln—Niagara Town     | 1     | ..    | Folyet                    | 3     | ..    |
| Middlesex—London         | 13    | ..    | Tisdale                   | 1     | ..    |
| West Williams            | 3     | ..    | McMeekin's Camp           | 1     | ..    |
| Parkhill                 | 4     | ..    | Victoria—Ops              | 1     | ..    |
| West Missouri            | 2     | ..    | Waterloo—Kitchener        | 11    | ..    |
| Moore Tp.                | 2     | ..    | Waterloo Town             | 5     | ..    |
| Muskoka—Bracebridge      | 3     | ..    | Galt                      | 1     | ..    |
| Gravenhurst              | 1     | ..    | Wellington—Elora          | 1     | ..    |
| Monck                    | 1     | ..    | Wentworth—Hamilton        | 18    | ..    |
| Nipissing—Widdifield     | 3     | ..    | Ancaster                  | 1     | 1     |
| Mattawa                  | 2     | ..    | Beverley                  | 2     | ..    |
| Madawaska                | 2     | ..    | York—Toronto              | 32    | ..    |
| Markstay                 | 2     | ..    | Newmarket                 | 1     | ..    |
| Norfolk—Woodhouse        | 2     | ..    | E. Gwillimbury            | 1     | 1     |
| Windham                  | 7     | ..    |                           |       |       |
| Charlotteville           | 11    | ..    |                           |       |       |
| S. Walsingham            | 4     | ..    |                           |       |       |
|                          |       |       |                           | 867   | 5     |



**CONVENTION WEEK IN TORONTO.**

Toronto offers many attractions during Convention Week. The month of May will see the opening meet of the Ontario Jockey Club, and the commencement of the International League's Baseball season. Delightful motor trips can be arranged through the Humber Valley and along the Lake Shore Highway. For those who enjoy trips by water, many places of interest are easily accessible as it is only a three hours' sail across the lake to Niagara Falls, Port Dalhousie, St. Catharines, and Hamilton. A nearby attraction is the Niagara Fruit Belt, which probably will be in full blossom in view of the early spring. Sight-seeing tours of the city are available and special entertainment will be provided for the ladies. Toronto's public buildings and institutions of learning, are nationally known, and the residential districts of the city are artistically laid out and extremely attractive.

Among the institutions which will be visited is the Tuberculosis Preventorium on North Yonge Street. Toronto is recognized as the pediatric centre of Canada, and the city's activities along the lines of Maternal and Child Welfare, are well known. In addition, for those practitioners who wish to brush up on certain lines of professional work, a special medical course of six days' duration (May 23-28) in medicine, obstetrics and gynaecology has been announced by the Faculty of Medicine in accordance with their plan of special graduate courses. Registration for this course should be made before May 7th. Opportunities will also be provided for studying the various activities of the Provincial and Civic Health Departments, with visits to filtration plant, sewage disposal works, and other points of special interest.

You cannot possibly spend three more profitable days socially and professionally this summer than by joining your confreres from coast to coast in Toronto.

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**CONVENTION COMMITTEES.****Committee on Programme:—**

Dr. R. R. McClenahan, Provincial Board of Health, Ontario.

**Committee on Hotel Accommodation and Transportation:—**

Dr. A. Grant Fleming, Department of Health, City of Toronto.

**Committee on Exhibits:—**

Dr. J. J. Middleton, Provincial Board of Health, Ontario, Toronto.

**Executive Committee:—**

Dr. J. W. S. McCullough, Dr. G. D. Porter, Miss E. M. Forsythe, Dr. Grant Fleming, Dr. R. R. McClenahan, Dr. R. D. Defries (Secretary, 206 Bloor Street West, Toronto).

## Programme

**Registration—May 16th, 9.30 a.m.**

### FIRST SESSION.

#### **Ontario Health Officers' Association.**

**Monday, May 16th, 10.30 a.m.—**

Public Health Advancement during the year—Dr. J. W. S. McCullough, Chief Officer of Health, Ontario.

Physically Fit—Dr. A. A. Metcalf, Almonte, Ont.

Water Supply of St. Thomas—Dr. McKillop, M.O.H., St. Thomas, Ont.

Difficulties of Milk Inspection—Dr. H. Logan, Niagara Falls, Ont.

The Desirability of and Difficulty in the Early Diagnosis of Infectious Diseases—Dr. H. Ross, Clifford, Ont.

Home Influence on Resistance Against Disease—Dr. F. T. Green, Stoney Creek, Ont.

Complimentary Luncheon, Ontario Health Officers' Association, Hart House, University of Toronto, 1 p.m. (Monday, May 16th.)

#### **Laboratory Section, Canadian Public Health Association.**

**Monday, May 16th, 10.30 a.m.—**

Chairman's Address—Dr. R. H. Mullin, Vancouver, B.C.

Unsuspected Syphilis of Nervous System, its Laboratory Diagnosis—H. B. Maitland, Toronto.

An Epidemic of Cerebro-spinal Fever—Dr. James Miller, Kingston, Ont.

Complement Fixation Test in Gonorrhoea—M. L. Wessels, B.A., Toronto.

### SECOND SESSION.

**Monday, May 16th, 2 p.m.—**

(Joint Session, Canadian Public Health Association and Ontario Health Officers' Association.)

Presidential Address—Canadian Public Health Association—Dr. John A. Amyot, C.M.G., Deputy Minister of Health, Ottawa.

Quarantine and Isolation in the Control of Communicable Diseases—Dr. Charles V. Chapin, Providence, Rhode Island.

Discussion to be opened by:—

Dr. J. W. S. McCullough, Provincial Board of Health, Ontario.

Dr. J. A. Baudouin, Superior Board of Health, Province of Quebec.

The Practice of Preventive Medicine—Prof. J. G. Fitzgerald, University of Toronto.

### THIRD SESSION.

**Monday, May 16th, 8 p.m.—**

**Programme at Both Toronto General Hospital, and Hospital for Sick Children, as Follows:—**

**Lecture Room, Toronto General Hospital.**

**Time 7.30 to 8.30 p.m.—**

A special Venereal Disease Clinic will be held, demonstrating the method of giving Phenarsenamine and Mercury.

Chairman's Remarks—Dr. Gordon Bates, Toronto.

Problems of Venereal Disease Clinics—Dr. Powell, Montreal, P.Q.

This will be followed by general discussion.



**Lecture Room, Hospital for Sick Children.****Time 8.15 p.m.—****Breast Feeding and Its Importance in Child Welfare Work—Dr. G. Smith, Toronto.****Institutional Care of the Infant—Toronto Experiments, with a Plea for Foster Homes—Dr. A. M. Goulding, Toronto.****Hereditary Syphilis, Its Relation to Infant Mortality and Child Welfare Work, with Discussion of Present Day Methods of Prevention and Control—Dr. E. A. Morgan.****FOURTH SESSION.****Ontario Health Officers' Association.****Tuesday, May 17th, 9.30 a.m.—****Presidential Address—Dr. D. A. McClenahan, Hamilton, Ont.****Medical Inspection of Schools—Dr. J. J. Broad, Wellington, Ont.****Notes on Sanitary Survey of Rural Schools—Dr. A. S. Thompson, Havlock, Ont.****Child Hygiene—Dr. W. J. Bell, Provincial Board of Health, Ontario.****The Public Health Nurse—Dr. J. J. Middleton, Toronto, Ont.****Public Health Expenditures—Dr. R. E. Wodehouse, District Officer of Health, Ontario.****Discussion to be opened by F. A. Dallyn, C.E., Toronto.****Election of Officers.****Laboratory Section, Canadian Public Health Association.****Tuesday, May 17th, 9.30 a.m.—****Some Observations on Milk Fermentations—Dr. Wilfred Sadler, Vancouver, B.C.****Interpretation of Wasserman Test—Dr. H. K. Detweiller, Toronto.****Elementary Bacteriological Instruction in our Public and High Schools—Prof. Jones, Guelph, Ont.****Protein Sensitization—Dr. A. H. Caulfield, Connaught Laboratories, University of Toronto.****Duration of Infectivity of Blood of Trench Fever Patients—H. S. Everett, C. A. Watson, and R. L. Hamilton, Department of Parasitology, McGill University.****Election of Officers.****Section of Child Hygiene, Canadian Public Health Association.****Tuesday, May 17th, 9.30 a.m.—****Report of Committee on Vital and Social Statistics—Chairman, Dr. W. A. L. Styles, Montreal.****Report of Committee on Rural Communities and Nursing—Chairman, Dr. F. C. Middleton, Regina, Sask.****Report of Committee on Maternal Welfare—Chairman, Hon. Dr. Wm. F. Roberts, St. John, N.B.****Report of Committee on Pre-Natal Care—Chairman, Dr. W. W. Lailey, Toronto.**

**Section of Mental Hygiene, Canadian Public Health Association.****Tuesday, May 17th, 9.30 a.m.—**

Chairman's Address—Dr. C. K. Clarke, Toronto.

Occupational Therapy for Mental Defectives—Dr. McGhie, London, Ont.

Paper (title to be announced)—Dr. Ryan, Kingston, Ont.

The Work of Special Classes for Mental Defectives in Toronto Schools  
—Dr. Eric Clarke, Toronto.

Mental Defectives—Dr. A. Nichol, Sebringville, Ont.

**Section of Social Hygiene, Canadian Public Health Association and  
Canadian National Council for Combating Venereal Diseases.****Tuesday, May 17th, 9.30 a.m.—**

Chairman's Address—Rev. Archdeacon Symonds, Montreal, P.Q.

"Social Aspects of the Venereal Disease Problem"—Miss Edna Moore,  
Provincial Board of Health, Ontario."Ethical and Spiritual Considerations in the Campaign against Venereal  
Disease"—Rev. Father Minehan, Toronto.Campaign Against Venereal Diseases adapted to Local and Provincial  
Needs—Dr. Gordon Bates, Toronto.

Election of Officers.

**FIFTH SESSION.****Tuesday Afternoon, May 17th, 2 p.m.—****Child Welfare Clinics—**This afternoon will be devoted chiefly to Field Work with visits to Child  
Welfare, Ante-Natal and Malnutrition Clinics. These clinics will  
be visited by groups of delegates and arrangements will be made  
for registration for visiting these clinics.**Sanitary Engineering—**A visit will be made to the Toronto Island Filtra-  
tion Plant, where both slow sand and the drifting sand filters will  
be inspected.**Laboratory Demonstration—**Preparation of Vaccines and Sera and of  
general laboratory procedure in diagnosis of tuberculosis, diph-  
theria, and syphilis, will be presented.**Tuesday, May 17th, 3 p.m.—****Annual Meeting of the National Council for Combating Venereal  
Diseases.****SIXTH SESSION.****Tuesday, May 17th, 8 p.m.—**

General Meeting of all Associations.

Eugenics and Public Health—Dr. C. W. Saleeby, London, Eng.

Modern Conception of Public Health Administration—Dr. C. J. O.  
Hastings, Medical Officer of Health, Toronto.**SEVENTH SESSION.****Canadian Association for the Prevention of Tuberculosis.**

(21st Annual Meeting, to which all delegates of the Convention are invited.)

**Wednesday, May 18th, 9.30 a.m.—**

(Programme on following page.)



**Canadian Public Health Association.**

**Wednesday, May 18th, 2.30 p.m.—**

Report of Committee on Medical School Inspection—Dr. Mary Crawford, Winnipeg, Man.

Importance of Maternal Care in Child Hygiene Work—Hon. Dr. Wm. F. Roberts, Minister of Health, New Brunswick.

Moving Picture Film,—First Child Welfare Film to be produced in Canada—Prepared by the Child Hygiene Section.

Report of Committee on Nominations.

Report of Treasurer—Dr. Fred Adams, Windsor.

Factors in the Reduction of Diphtheria Mortality in Winnipeg—Dr. A. B. Alexander, Municipal Hospitals, Winnipeg, Man.

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**Canadian Association for Prevention of Tuberculosis.****TWENTY-FIRST ANNUAL MEETING**

(All delegates to the Convention and the Public, are invited.)

**Wednesday, May 18th, 9.30 a.m.—**

Report of General Secretary—Dr. G. D. Porter.

Anti-Tuberculosis Work in France—Dr. O. Leclerc, Quebec.

Presidential Address—Hon. Dr. F. L. Schaffner, Winnipeg, Man.

Address—Dr. John B. Hawes, Boston, Mass.

Discussion to be opened by Dr. J. H. Elliott, Toronto.

Some Canadian Mortality Tables—Dr. C. D. Parfitt.

Paper (title to be announced)—Col. W. M. Hart, D.S.C.R., Ottawa.

Discussion to be opened by Dr. J. H. Holbrook, Hamilton.

**Wednesday Afternoon, 2.30 p.m.—**

The Afternoon will be devoted to clinics.

2.30 p.m.—Chest Clinic, Hospital for Sick Children—Dr. Harold Parsons

4.00 p.m.—Reception I.O.D.E. Preventorium, North Yonge Street.

(Clinics will also be conducted on Thursday morning at 9 o'clock  
• in the Western Hospital, by Dr. Odgen, and by Dr. Caulfield  
at the D.S.C.R. Hospital, Christie Street.)

Executive Council Meeting will be held Wednesday evening.

**RAILROAD RATES**

**SPECIAL NOTICE!** Reduced Rate (Fare and Three-Fifths) on Standard Certificate Plan under conditions outlined on next page will be in force from ALL POINTS IN CANADA.

## HOTEL ACCOMMODATION

| Hotel                         | Address | Single                  | European                |                         | Double with bath        | Double with bath        | American |        |
|-------------------------------|---------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------|--------|
|                               |         |                         | Single                  | Double                  |                         |                         | Single   | Double |
| Carls-Rite, Front & Simcoe    |         | \$3.00                  | \$3.50<br>and<br>\$4.00 | \$6.00                  | \$3.50<br>and<br>\$4.00 | \$5.00                  | \$10.00  |        |
| Elliott, Church & Shuter .... |         | \$2.50                  |                         | \$4.00                  | \$5.00                  | \$4.00                  | \$8.00   |        |
| King Edward, King St. E...    |         | \$2.50                  | \$4.00                  | \$4.50                  | \$6.00                  | .....                   | .....    |        |
| Pr. George, King & York....   |         | \$2.50<br>and<br>\$3.00 | \$3.00<br>and<br>\$3.50 | \$4.00<br>and<br>\$5.00 | \$5.00<br>and<br>\$6.00 | .....                   | .....    |        |
| Queen's, Front St. W. ....    |         | \$2.50<br>and up        | \$3.50<br>and up        | \$5.00                  | \$6.50                  | \$5.00                  | \$10.00  |        |
| Walker House, Front & Yk.     |         | \$2.50                  | \$3.50                  | per<br>day              | per<br>person           | \$5.00<br>and<br>\$6.00 | .....    |        |
| Waverley, Spadina & Col.      |         | \$2.00<br>\$2.50        | \$2.50<br>\$4.00        | \$3.00<br>\$3.50        | \$4.00<br>\$6.00        |                         |          |        |
| Westminster, Jarvis St. ....  |         | .....                   | \$2.50<br>and up        | .....                   | \$4.00<br>and up        |                         |          |        |

Everyone is urged to make early reservations directly with hotel concerned, or through Chairman of Committee on Hotel Accommodation, Dr. A. Grant Fleming, Department of Health, City Hall, Toronto.

## RAILROAD RATES:—

Certificates will be issued from all parts of Canada, including British Columbia and the Maritime Provinces.

Certificates will be issued from points in British Columbia, May 9th-12th inclusive. Provinces of Alberta, Saskatchewan, Manitoba, and Ontario, west of Port Arthur, May 11-14 inclusive. East of Port Arthur, May 12-18 inclusive.

Validated certificates will be honoured for return journey up to and including May 21st. No stop-over privileges. If certified attendance is:—

99 or less .....4/5 one way ordinary first-class adult fare plus 25c.

100 or more .....3/5 one way ordinary first-class adult fare plus 25c.

## NOTE:—

Purchase a one-way ticket and ask for standard certificate. If those coming from points near Toronto and throughout Ontario will co-operate, those coming from Quebec, Maritime Provinces will be able to obtain lowest rate.

## REMEMBER:—

There must be at least 100 standard certificates in order that the return fare will be 3/5. This is considerable less than ordinary return fare.

## DO YOUR SHARE EVEN IF THE SAVING TO YOU IS ONLY A TRIFLE—

Remember those coming from a distance who will appreciate this reduction.



## The Toronto Milk Campaign

Milk week in Toronto, April 4th to 9th, marks the successful completion of the first milk campaign held in Canada. The campaign was under the joint auspices of the Child Welfare Council of Toronto, the Canadian Public Health Association and the National Dairy Council of Canada. The organization consisted of committees covering the following activities:—Publicity, Exhibits, Speakers, Poster and Jingle Contest, Moving pictures and Amateur Dramatic presentation by school children.

The publicity consisted of large paid advertisements in the daily papers, and free distribution of blotters featuring "Mr. Milk Bottle" with the appropriate caption "Milk Makes Muscle." Small blue buttons inscribed "I drink milk," were also freely distributed to children and the excellent pamphlet on milk issued by the Metropolitan Life Insurance Company was used for adult circulation. Circular letters were sent to the physicians of the city outlining the campaign; also to Sunday School superintendents requesting favourable mention to their schools. The leading hotels and restaurants were given signs and cuts for use on dining-room walls and menus referring to the campaign and advising all to "Drink a glass of milk to-day." Advertising posters with appropriate matter were carried by four hundred Toronto street cars throughout the week.

The formal opening of the campaign took place on Tuesday afternoon when the Honourable Manning Doherty, Minister of Agriculture for Ontario, delivered an address and milked a cow in front of the Parliament buildings, before a large gathering. Similar functions were taken part in by other prominent people in parks throughout the city on each day of the week, and at all of these half pint bottles of pasteurized milk were freely distributed to children present. Free milk to the extent of one quart per child was also given to the children's institutions of the city.

Arrangements were made with three of the leading department stores for appropriate window displays, one featuring "the fountain of health"—a milk fountain; another "the milky way"—the way to health via the milk route and the third a collection of photographs of healthy milk-drinking children. One of these stores also built a special booth in the infants' department where two of the city nurses weighed children, advised the mothers as to diet and distributed milk.

The speaking campaign included five and ten minute talks in a number of factories, clubs and other places, talks in the schools by

the school nurses and addresses by Dr. J. W. Robertson, Chairman of Executive of the Canadian Red Cross, who spoke at Earls court to the G.W.V.A., and Dr. Chas. E. North, the eminent American specialist on nutrition, who gave an address at Convocation Hall, University of Toronto.

The Poster andd Jingle contest for children called for the submission of small posters and limericks on the food value of milk, for which many prizes were distributed.

In a number of moving picture theatres suitable slides were shown at regular performances also a special educational milk film entitled "The White Bottle."

The wind-up of the campaign, which took place Saturday afternoon in Massey Hall, opened with a play entitled, "The Milk Fairies," taken part in by fifty school children. Following this "The Jolly Jester," of the Child Health Organization of America, amused and educated by his ventriloquial exhibition in which milk and water talk, vegetables give sage and witty advice and his celebrated mannikin, "Harry," instructs all and sundry how to live and move and have their being.

This campaign being the first of the kind attempted in Toronto was somewhat experimental in its nature, but it can not but result in an increased knowledge and appreciation on the part of the public, of the value of milk in the diet, particularly of the growing child.

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## News Notes

Dr. Arabella MacKenzie has recently been appointed to the staff of the Massachusetts-Halifax Health Commission to direct the work of the pre-school age dental clinics at the Admiralty House Health Centre. This is said to be the first dental clinic in the world that will limit its work to the pre-school age period. The dental clinic will co-ordinate the dental work with the various medical clinics, Child Hygiene, Nutrition and Posture. Nutrition of the teeth as well as dental prophylaxis will be featured as essential to oral health.

Dr. F. W. Tidmarsh, after having taken a special course in conducting Nutrition Clinics in Boston, has been appointed to the same staff for the purpose of organizing Nutrition Clinics in the Commission's Health Centres in Halifax and Dartmouth. Nutrition Clinics will be organized for under-nourished pre-school age children and school age groups.

Dr. W. Alan Curry has accepted an appointment to organize Posture Clinics for the Massachusetts-Halifax Commission. To this service children will be admitted, after such handicaps as adenoids and tonsils have been removed, and the teeth having been placed in the best of condition it is possible to put them in.

These three services will be watched with the greatest of interest by the medical and nursing profession and by all public health workers.

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A Branch of the Canadian National Council for Combating Venereal Diseases has been formed in London, Ontario.

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The Executive Officer of the Massachusetts-Halifax Health Commission recently received from Dr. H. W. Armit, Editor of the Medical Journal of Australia, a letter reading as follows:—

"Dr. V. G. Heiser recently gave me a graphic account of the interesting demonstration in public health that is taking place in Halifax.

"It appears to me that the lessons to be learned from the experience of your Commission are so important that full publicity should be given to all the details of the campaign. The object of this letter is to ask you if you would be good enough to contribute for "The Medical Journal of Australia" a detailed article on the history,

organization, details of administration and achievements of the Massachusetts-Halifax Health Commission. I am also hopeful that you might be prepared to continue this, year by year, with a special report of the development of the work during the preceding twelve months."

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Prof. C. E. A. Winslow, of the Yale School of Medicine, has been appointed Director-General of the Medical Department of the League of Red Cross Societies and has taken up his duties.

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The Second Annual Convention of the Ontario Safety League will be held at the King Edward Hotel, Toronto, on April 27 and 28, following the Second Annual Meeting of the Canadian National Safety League.

Six papers on various phases of accident prevention have been arranged for and should create a lively discussion. Following the business meetings in the morning, two papers will be presented on the afternoon of Wednesday the 27th—the first on "Traffic" and the second on "How to Interest the Employee in Safety." Four papers will be given on Thursday, the 28th. These papers being "Workmen's Compensation", "Falls and Falling Objects", "Safeguarding Machinery" and "School Safety."

The Massachusetts-Halifax Health Commission has opened a second Health Centre in the area of the great explosion disaster of 1917. This new centre is in the old Post Office building in Dartmouth. The building is splendidly adapted for the purpose. The Health Centre was opened at a tea given on Wednesday afternoon, March 2nd. The leading citizens of Dartmouth, representatives of every charitable and philanthropic endeavour, as well as professional men and women of the community were present. The medical staff are announced as Dr. H. A. Payzant, who will organize the Prenatal and Child Welfare Clinics; Dr. M. G. Burris, the Tuberculosis Service; Dr. G. G. Candier, the Eye, Nose and Throat service; and Dr. F. W. Tidmarsh, the Nutrition Clinics. The nursing service will be organized by Miss Mary D. Patterson, under the general direction of Miss Ross, the Chief Nurse of the Commission.

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Mrs. Emmeline Pankhurst, the famous English Suffrage Leader, will tour Canada soon under the auspices of the Canadian National Council for Combating Venereal Diseases. The general topic of Mrs. Pankhurst's address will be "Social Hygiene." The tour commences with an engagement at Massey Hall, Toronto, on April 22nd, when she will speak on "Social Hygiene and the World's Unrest."



The New Brunswick Health Week commences on Sunday, April 24th.

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With the departure of the sixteen Public Health Nurses for their respective health districts in October, the educational and propagandic work of the Division of Maternal and Child Welfare, Provincial Board of Health, was definitely launched in Ontario. Reports from the field since that date, continually show the success which is attending the work and an increasing appreciation on the part of the general public of the value and importance of the conservation of maternal and child life. Demonstrations, including public meetings, Infant Welfare Clinics and follow-up work in the homes, have been held in various centres in the different districts.

At two points—Galt District No. 2, and Timmins, District No. 6, following the demonstration of the Provincial nurses, the appointment of a Public Health Nurse by the local community has been secured. Other centres visited for demonstration, include Woodstock, Orillia, Dundas, Rockland, Kenora and Thessalon. The Division has received, from time to time, additional requests for visits from the nurses, and in some instances, preliminary meetings with a speaker from the Department have been held in these localities.

The first conference of the nurses—for purposes of general discussion and consideration of contingencies arising in the field—was held in Toronto February 11th and 12th, after three months of work in the districts.

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April 1921

## Child Welfare Work in Prince Edward Island

Prince Edward Island is not going to be a laggard in the work for Child Welfare and Public Health which is receiving long overdue attention throughout the world. Facts are convincing—and the more startling they are the greater the effect on the minds of the people. The startling facts, brought out through the reports of the medical officers, when they were examining young men for the army have given a warning not to be ignored of the vital importance of concentrating attention on the health of the children.

Living in a community largely rural, where even the registry of births has been carried out very indifferently, many of us were overwhelmed and bewildered at the thought of beginning public health work. Miss Amy MacMahon, however, who has come to us after five years' service overseas, is enthusiastically starting us on the peace-time programme of the Red Cross Society. She has grasped the significance of beginning with the children, and at present she is putting all her energy into work among the school children and in very truth she 'hath a way' with them. Important and necessary as 'Medical Inspection of Schools' is, we rather how the children have dreaded it and how the parents have often resented it. I have heard Miss MacMahon in her breezy, friendly way, give her Health Talks to Children. She takes it for granted that their ideal is a strong, healthy body, and before she has finished her first talk there is not one little one—or big one either—who is not filled with zeal to be physically fit and to be A1 Canadians. 'Hygiene' has always been one of the most boring of subjects taught in the school, but Miss MacMahon appeals to the human side of the children—and they are human—the prevalent school curriculum to the contrary notwithstanding. Soon good health habits, physical fitness, measuring up to weight, become the subjects for discussion among the groups of girls and boys, as one catches a word or two in passing.

After general health habits have been discussed in a grade, Miss MacMahon, with an assistant, weighs and measures the children and talks to each individually on his or her special needs. Finally, after this preliminary though most important work is done, the specialists visit the school for examination of ear and eye, nose and throat. Each child is also stripped to the waist and thoroughly examined by a physician, word being sent to the parents asking them to be present at this final examination or to send a note if



there is anything to which they wish to draw the physician's attention. Notifications are then made out for the parents stating any defect that may be found and stressing the importance of having the defect corrected.

Follow-up work is carried on and Health Clubs organized, while talks are given to parents through Parent-Teachers' Associations and Women's Institutes. We are hoping—but there Miss MacMahon warned me that no one wants to know what we are hoping but what we are **doing**. Nevertheless we **are** hoping to report a great extension of our work after Junior Red Cross branches have been organized, and especially when Public Health is properly taught in our Normal School.

## LET'S GO!

**N**ational—all Canada.

**P**ublic—all of us.

**H**ealth—best of all.

**C**an you afford to miss it?

**O**bey that impulse, make plans now.

**N**othing should keep you away.

**G**ood opportunity, good programme.

**R**ight now is the time to plan.

**E**very day an interesting programme.

**S**afety first—keep up to date.

**S**ocially and professionally a pleasure.

**1 000** reasons why you should be there.

**9**—less nine why you should not.

**2** plus one days of pleasure and profit.

**1 921**, May 16, 17 and 18th.

**T O R O N T O.**

## Notes on Current Literature

### From the Department of Information on Public Health Canadian Red Cross

#### INTERESTING ARTICLES IN RECENT PERIODICALS.

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##### PUBLIC HEALTH TRAINING.

*"American Journal of Public Health,"* April, 1921, page 371.

The report of a committee appointed by the President of the American Public Health Association to consider the question of a standardized professional training for positions in the public health field.

##### THE FIELD OF RURAL NURSING.

*"Public Health Nurse,"* March, 1921, page 129.

"Health conditions in rural districts generally are poorer than in the cities, the country has a higher mortality in tuberculosis and infant life, and a larger proportion of children with physical defects." Rural authorities who are reluctant to increase health services may be persuaded by this article that country children deserve as careful cultivation as crops and live stock.

##### A TALK ON TALKING.

*"Public Health Nurse,"* March, 1921, page 119.

Every public health nurse who is called upon to address meetings should benefit by this helpful advice on simplified public speaking.

##### HIGH SCHOOL GIRLS AND NURSING.

*Public Health Nurse,"* March, 1921, page 122.

A study of the reasons why more high school girls do not enter the nursing profession. This should interest superintendents of training schools having difficulty in recruiting student nurses.



## HEALTH SUPERVISION IN COLLEGES.

— "*American Journal of Public Health*," April, 1921, page 309.

A symposium under the following headings:

1. Education in Health.
2. Supervision of Health.
3. Students' Infirmary.
4. Department of Hygiene and Public Health.
5. Mental Hygiene and the College Student.

## A SURVEY OF NUTRITION WORK.

"*The Survey*," March 12th, 1921, page 860.

Dr. L. Emmett Holt outlines the requirements of the nutrition class.

## THE PROMOTION OF HEALTH IN CHILDREN.

"*United States Public Health Reports*," March 11, 1921, p. 524.

A review of the regulations of the British Board of Education for promoting the healthy physical and mental development of children.

## VENEREAL DISEASE PAMPHLETS.

Issued by the Department of Health, Canada. Editions in both English and French:

1. Information for Men.
2. Information for Young Women.
3. Information for Parents.
4. Circular to the Medical Profession.
5. The Wassermann Test.
6. Microscopic Examinations.

## PREVENTION OF VENEREAL DISEASES.

"*National Health*," March, 1921, page 207.

A report by the National Birthrate Commission on some fundamental factors in the prevention of venereal diseases. Although a non-official body, this commission was assisted by the Ministry of Health. The results are interesting but not novel.

**A PROGRAMME OF SOCIAL HYGIENE.**

*"American Journal of Public Health,"* April, 1921, page 306.

The Bureau of Social Hygiene of the California State Board of Health has divided this work into three departments—medical, social service and educational. The operations of these departments are detailed.

**CANDIAN RED CROSS PUBLICATIONS.**

Advisory and Couselative Committee, report of Second Meeting.

Junior Bulletin No. 1.

Manitoba Division, report for 1920.

Nova Scotia Division, record of Work in the War.

Quebec Division, report of 1920.

**HOW CAN WE CONTROL COMMUNICABLE DISEASES.**

*"Toronto Health Bulletin,"* February, 1921.

NOTE.—Provincial divisions may borrow copies of any of the articles listed above and may add names to the Library Bulletin mailing list upon application to Dr. Ruggles George, Head Office.

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# The Public Health Journal

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## Ontario Municipal Health Efforts

BY DR. ROBT. WODEHOUSE, O.B.E., *District Officer of Health.*

In presenting to you the results of my efforts to make a survey of the monies spent by the Municipal Boards of Health of the Province of Ontario, it should be made clear that it is my opinion that any public health effort and its results are inseparable from the consideration of the final outlay associated with it. Indeed, the often repeated saying, "Public health is purchasable upto a certain point," by many leaders in state medicine, sufficiently warrants my desire to crave your attention to the following subject matter.

The Fort William Board of Trade asked the writer to provide them with comparative municipal health costs or expenditures, for cities in Canada, of a similar population, and the activities carried on with their cost allotment, for the Board's annual meeting in 1920. The cities, eight in number, were requested to furnish certain data and as is usually the case, forwarded the desired information. When the information received, was assembled, it was impossible to make a single comparison of the total expenditures or of the divisional activities, due to the fact that all the cities kept their accounts differently, many had side undertakings, such as garbage collection, relief of indigents, both sick and well, and officers with duties common to more than one city department, etc.

This prompted the motion put to the Ontario Medical Officers of Health Association last spring, for the appointment of a committee, to endeavor to suggest a uniform method of annual Board of Health reports, showing activities, with costs allotted, and further, to suggest an organization of municipal health departments, large and small, which would facilitate health costs and health-activity results, being made possible of comparison and study—both urban

and rural. The committee was appointed and a report is ready for presentation. During the interval I was transferred for duty by the Provincial Board of Health, to District No. 2. It was natural in a uniformly populated and organized area, to endeavor to collect data along the foregoing lines. This was first done for the purposes of educational addresses, to Boards of Trade, etc., in five cities, and was materially assisted in by Prof. Fitzgerald, who, by the way, had been doing similar investigating for comparative purposes, in the different provinces, in his capacity of advisor to the Canadian Red Cross Society in Hygiene. The municipal figures proved so interesting that it was deemed advisable that an attempt be made to study every municipality—city, town, village and township in the Province.

The chief officer was approached and kindly arranged that every facility be granted for searching the files of the Ontario Bureau of Municipal Statistics, and working up the municipal audits deposited with them.

A copy of the municipal report was obtainable, with detailed items of expenditure, for every city, town, village and township in Ontario, with the probable exception of six, and figures for these have since been obtained and incorporated in the report. The expenditures used for this paper are therefore the sworn expenditures for the year 1919, filed by the municipalities in accordance with the statutes. The population used were the assessors' figures for the same year, obtained from the same source as were also the total assessed values for 1918, and the total taxes levied on these assessments, which presumably would supply the money for 1919 public health expenditures. The following features have been worked out:

(I.) The total expenditure by each municipality.

(II.) The percentage or fraction that this amount is, of the tax income for the year for the municipality.

(III.) The rate per head population the expenditure represents.

(IV.) The taxes collected per head population.

(V.) The municipalities which did not spend a cent for public health.

(VI.) The municipalities which did not pay a cent to a medical officer.

(VII.) The amount paid by others to the M. O. H.

(VIII.) The cost per head of population the M. O. H. salary represented per year.



(It should be understood that every organized municipality actually has an officially appointed Medical Officer of Health.)

The following totals were obtained:

|                     | Populations.    | Municipal<br>Income (Taxes). | Municipal Board<br>of Health<br>Expenditures. |
|---------------------|-----------------|------------------------------|---|
| Cities .....        | 1,109,387       | \$43,820,038                 | \$869,267                                     |
| Towns 5,000 pop.... | 155,622         | 2,695,756                    | 40,244  |
| Rural .....         | 1,334,941       | 21,567,297                   | 137,927                                       |
|                     | <hr/> 2,599,950 | <hr/> \$68,083,091           | <hr/> \$1,047,438                             |

The Board of Health for the Province of Ontario appropriated for its population of 2,599,950, from a Provincial income of \$19,000,000, for the year 1919, \$528,000, or 1/34 of the Provincial income, about 20c. a head population.

The city of Toronto spent for its population of 489,681, from a tax income of \$20,234,656, for 1919, \$600,180, being 1/34 of the cities income, or about \$1.23 a head, through the Board of Health.

Two other cities in the Province, Fort William and Port Arthur, spent respectively, over a dollar a head through their Boards of Health, the same year, for active health programme. In districts VI., VII., VIII. population conditions and municipal practices have produced rates of expenditure through Boards of Health and fractions of tax income for all sizes of municipalities, not comparable with Districts I., II., III., IV. and V.

In round numbers, Toronto might be stated to have 1/5 of the total population of the Province.

The cities, other than Toronto, in the Province, 23 in number, had a population in 1919 of 619,706, a municipal tax income \$23,585,382, and a municipal expenditure aggregation \$269,087 by their Boards of Health. This roughly disposes of two-fifths of the Provincial municipal population activities in Public Health, through Boards of Health.

The other three-fifths of the Province's population inhabit 22 towns of over 5,000 population, totalling 155,622, and had a tax income of \$2,695,756, and paid through their Boards of Health a total of \$40,242, and a rural population aggregating 1,334,941, with a tax income of \$21,567,297, paying for health purposes through Boards of Health, \$137,927. This rural group consists of 114 towns under 5,000 population, 147 villages and 544 townships. These last municipalities are most irregular in size or population. All towns are not even 1,000 souls strong, let alone the 2,000 we

usually associate with the requirements for incorporation as such. Many villages have over a 1,000 population. Townships vary from three figures up to five figures, inclusive, a few being over 5,000 and one over 30,000 population. It evidently follows that the population basis for comparison, is a very poor one, but the best available. The three groupings used, namely cities, towns (over 5,000), and rural, are apparently self grouped, financially, in accordance with this. This fact was not known at the beginning. For instance, only in one case in the province is a city Board of Health spending less than 15c. a head population a year, the average for city populations being above 70c. On the other hand, towns of 5,000 population in each of three counties spent just less than 10c. a head population a year, the average for the Province being above 25c. a head population a year. The rural communities of 38 out of 54 counties and districts, spent under 10c. a head population per year, the average for the Province actually being 10c. a head population per year. Below is shown in Table II. a regrouping, which seems nearer to the actual conditions—the majority of cities, outside of Toronto, being on a par with the 5,000 population towns. The actual fractions of tax income spent by Boards of Health are shown and the amount per head population this expenditure represents, and also in two right hand columns are shown appropriate rates which would furnish a more nearly modern conception of a Board of Health's obligation to a community in the way of furnishing a programme to "prevent sickness and ameliorate suffering," and the fraction of municipal income it would come to:



|                                   | Population | Fraction of Province of | Tax Income   | Fraction of Income spent for Public Health. | Health Expenditure Aggregate | Health Expenditure per head | Recommended Fraction of Health Expenditure for per head | Health Expenditure per head |
|-----------------------------------|------------|-------------------------|--------------|---|------------------------------|-----------------------------|---|-----------------------------|
| Province of Ontario .....         | 2,599,950  | 1/1                     | \$19,000,000 | 1/34  | \$528,000                    | \$0.20                      | .....   | .....                       |
| City of Toronto .....             | 489,681    | 1/5                     | 20,234,656   | 1/34  | 600,180                      | 1.23                        | 1/34  | \$1.25                      |
| Cities other than Toronto .....   | 609,706    | 1/5+                    | 23,585,382   | 1/88  | 269,087                      | 0.44                        | 1/45  | 0.70                        |
| Towns over 5,000 population ..... | 155,622    | 1/5—                    | 2,695,756    | 1/67  | 40,244                       | 0.26                        | 1/45  | 0.70                        |
| Rural .....                       | 1,334,941  | 8/15+                   | 21,567,297   | 1/163                                       | 137,927                      | 0.10                        | 1/66  | 0.25                        |

Strange to say, the rate suggested to Boards of Trade in District II., was 65c. a head population per year, for cities of over 15,000 population. Upon investigation, the average for all cities in the Province proved to be 78c. a head population a year, but as shown in Table II., the true city average outside Toronto is 44c. a head population a year. If this rate were increased to, say 70c. a head, and the fraction of income increased to (twice) its present rate, it would bring it into what would appear to be its natural relation to Toronto's fraction, and that of towns of over 5,000 population, its next group down the table, at say, 1/45.

That the rural communities are entirely out of proportion to their health obligations is evident from the fact that their whole rate of 10c. should be absorbed as the minimum fee for the services of their M. O. H. It would appear that this rate of expenditure through the Board of Health should be at least 25c. a head. As stated above, towns over 5,000 population require rates of small cities, owing to their natural inclinations, interests, municipal activities and desire for municipal service in this and other lines. Towns under 5,000 population only need the rural rate, but the existing rural rate should be that of the towns over 5,000, as paid in 1919, bringing the rural rate up to the 25c. a head suggested above, and the resulting fraction of the municipal income from taxes up to 1/66.

It would appear from a study of the conditions that this would lead to a fair apportionment of activity in public health in the three types of fields, namely, large city, small city, and rural communities, warranted by the preventable, disease and death incident hazards if this proportion of municipal income were diverted to public health municipal activities, namely: 1/34 for large cities, 1/45 for small cities, and 1/66 for rural communities.

These proportions should finance all economically conducted undertakings, including medical school inspection. It necessarily follows that populations would need to be grouped for administration of public health into areas having an aggregate of at least 40,000 population to warrant the employment of full time Medical Officer of Health, at the minimum of \$4,000 per year, including expenses, based upon the rate set by law in New York State of 10c. a head per year. I believe the necessary personnel and programme of activities for 40,000 people could be financed on the income suggested in Table II., if the different scales were applied to the different municipal population forming the area. This indicates a public health administrative area of a minimum size. As this size in-



creases the necessary funds required to finance it, will be found, by applying the same scales, to be provided to pay the additional personnel, on the same basis, but of course the M. O. H. salary will have a limit and thus afford additional source of money for other scientific or professional personnel. As the density of population increases the time lost, by transportation of personnel and their wards, diminishes and the result from efforts of personnel per office hour increases sufficiently to cope with the increased disease hazard from preventable causes, whose climb up the scale is due to population congestion.

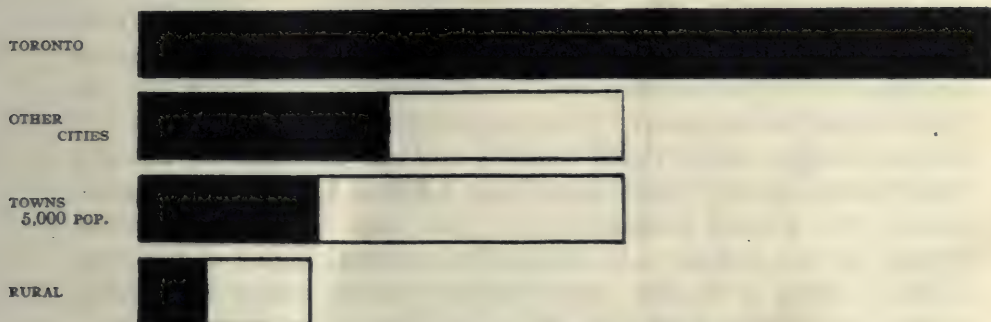
District No. II. has been taken as a specimen area, and its details are presented in Table III.

TABLE III.  
PROVINCIAL BOARD OF HEALTH DISTRICT NO. II.

| PUBLIC HEALTH EXPENDITURES<br>1919<br>Total per head Pop. |         |                  |         |        |                |        |                  |            |        | SALARIES PAID M.O's. H. |                  |          |       | Average per head pay for Medical Officers of Health in all types of Municipalities in District No. II, where paid at all, is 4c. per year. |                |             |
|---|---------|------------------|---------|--------|----------------|--------|------------------|------------|--------|-------------------------|------------------|----------|-------|--|----------------|-------------|
| POPULATION  |         |                  |         |        | MUNICIPALITIES |        |                  |            |        | MUNICIPALITIES          |                  |          |       |  | Paid Nothing   |             |
| Cities  | Num-ber | Towns 5,000 Pop. | Num-ber | Rural  | Num-ber        | Cities | Towns 5,000 Pop. | Rural      | Cities | Per Head                | Towns 5,000 Pop. | Per Head | Rural | Per Head   | Municipalities | Popu-lation |
| Bruce.....  | ..      | ..               | ..      | 41,656 | 30             | ..     | ..               | 6c.        | 8      | ..                      | ..               | ..       | 992   | 1½c.   | 9              | 14,246      |
| Dufferin.....   | ..      | ..               | ..      | 14,130 | 9              | ..     | ..               | 3c.        | ..     | ..                      | ..               | ..       | 245   | 2c.  | 3              | 4,144       |
| Grey.....   | I       | ..               | ..      | 47,177 | 26             | 15c.   | ..               | 8c.        | 500    | 4c.                     | ..               | ..       | 1,831 | 5c.  | 9              | 16,262      |
| Huron.....  | ..      | ..               | ..      | 46,965 | 26             | ..     | ..               | 7c.        | ..     | ..                      | ..               | ..       | 1,325 | 4c.  | 8              | 11,855      |
| Perth.....  | I       | ..               | ..      | 32,911 | 15             | 35c.   | ..               | 7c.        | 500    | 3c.                     | ..               | ..       | 1,163 | 4c.  | 2              | 2,867       |
| Waterloo.....   | II      | 5,105            | I       | 32,216 | 10             | 27c.   | 9c.              | 5c.        | 1,400  | 4c.                     | 300              | 3c.      | 760   | 3c.  | 2              | 4,966       |
| Wellington.....   | I       | ..               | ..      | 34,464 | 21             | 16c.   | ..               | 8c.        | 500    | 3c.                     | ..               | ..       | 1,348 | 4c.  | 2              | 2,231       |
| 78,210  | V       | 5,105            | I       | 24,719 | 137            | 24c.   | 9c.              | 7c. ave'ge | 2,900  | 4c.                     | 300              | 3c.      | 7,664 | 4c.  | 35             | 56,571      |



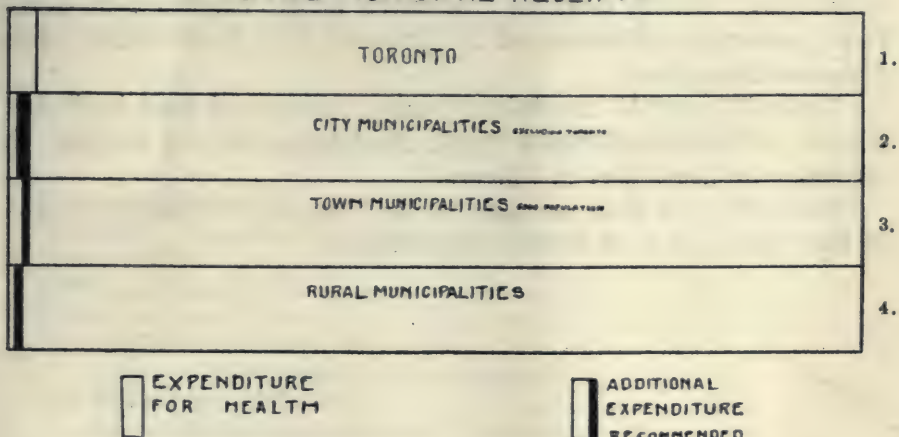
I.



BLACK PORTION—AMOUNT SPENT PER HEAD BY BOARD OF HEALTH.  
WHITE ENCLOSURE—ADDITIONAL AMOUNT RECOMMENDED TO PROVIDE  
MODERN PROGRAMME.

II.

TOTAL MUNICIPAL RECEIPTS



It is evident from this table what a chaotic condition exists among our Medical Officers of Health, 35 of whom accepted office in 1919 for some municipality and did not receive one cent for their services. The total for the whole Province who did this in 1919 is 318. Thirty-five rendered this legally official service to *one fifth* of the *rural population* of *District No. II.*, the balance of the rural population of this district paying their Medical Officers of Health an average of 4c. a head a year, one county averaging 4/10 of a cent per head population per year. Three townships in Grey County, one in Huron County, one in Perth County, and one in Waterloo County, respectively, having populations from 1,500 to 3,000, paid approximately 10c. a head population per year, and there is no special reason one can assign to it, except the personal factor of the local Medical Officer of Health. Just look up the townships of Holland, Keppel, Sydenham, McKillop, Ellice and Dumfries, respectively.

Having suggested the proper charge per head for different types of municipal areas and also the population size of a minimum public health administrative area supporting a full time M. O. H., it is only fitting that your attention be brought to three suggested allotments of time, personnel (which is the same), and money, for equipment and undertakings of programme. These allotments are based upon scientific calculation endeavoring to arrive at the most promising fields for remuneration for effort, in the way of the most financial saving to the individuals and to the community as a whole, from the reduction of the incidence of deaths from preventable disease and the prevention or amelioration of the diseases themselves.

Table IV. and V. are taken from a score card used by Robert Olesen, of the United States Public Health Service, for scoring "the efficiency of Local Health Officers."

Table VI. is a 1920 revision by Dr. Chapin, of Providence, R.I., of his "Evaluation of Health Activities."



TABLE IV.—ACTIVITIES.

| Character of Activity.   | Score of Points |         |
|--|-----------------|---------|
|  | Perfect         | Allowed |
| 1 Communicable diseases; suppression and prevention ..   | 18              | .....   |
| 2 Laboratory diagnosis, collection and transmission of specimens for diagnosis and investigation. Distributions of antitoxins and serums ..... | 10              | .....   |
| 3 Education of Public; Exhibits, lectures, circulars, newspaper articles, etc. ....  | 8               | .....   |
| 4 Vital Statistics .....   | 7               | .....   |
| 5 Co-ordination of extraneous health agencies .....  | 6               | .....   |
| 6 Concurrent disinfection .....  | 6               | .....   |
| 7 Infant and maternal welfare work .....   | 6               | .....   |
| 8 Public Health Nursing .....  | 5               | .....   |
| 9 Control of water supplies .....  | 4               | .....   |
| 10 Inspection and control of milk supplies .....   | 4               | .....   |
| 11 Occupational diseases, prevention and control .....   | 4               | .....   |
| 12 Medical Inspection of school children and correction of defects .....   | 4               | .....   |
| 13 Mental Hygiene .....  | 3               | .....   |
| 14 Control of such preventable diseases as heart and kidney diseases, etc. ....  | 3               | .....   |
| 15 Clerical work, correspondence, records and reports ....   | 3               | .....   |
| 16 Sewage disposal .....   | 3               | .....   |
| 17 Attendance at conferences, board of health meetings   | 3               | .....   |
| 18 Food and meat inspection and control of slaughter houses, butcher shops and grocery stores .....  | 1               | .....   |
| 19 Inspection of public buildings .....  | 1               | .....   |
| 20 Terminal fumigation .....   | $\frac{1}{2}$   | .....   |
| 21 Investigation and abatement of nuisances .....  | $\frac{1}{2}$   | .....   |
| Total .....  | 100             | .....   |

TABLE V.—EQUIPMENT.

| Nature of Equipment.                                      | Score in Points |         |
|---|-----------------|---------|
|   | Perfect         | Allowed |
| 1 Telephone .....   | 20              | .....   |
| 2 Transportation .....                                    | 17              | .....   |
| 3 Clerk .....   | 12              | .....   |
| 4 Office .....  | 10              | .....   |
| 5 Report Cards (a) From Physicians .....                  | 5               | .....   |
| (b) To state board of health .....                        | 5               | .....   |
| 6 Quarantine cards (Placards) .....                       | 8               | .....   |
| 7 Vaccine and antitoxine or facilities for obtaining same | 7               | .....   |
| 8 Record Books of filing cases .....                      | 6               | .....   |
| 9 Literature for self-education and reference .....       | 5               | .....   |
| 10 Literature for distribution .....                      | 4               | .....   |
| 11 Fumigants or facilities for obtaining same .....       | 1               | .....   |
| Total .....   | 100             | .....   |

TABLE VI.—RELATIVE VALUES OF HEALTH WORK.

|                                |       |       |
|--------------------------------|-------|-------|
| Vital Statistics .....         | 60    | 6 %   |
| Education .....                | 80    | 8 %   |
| Laboratory .....               | 50    | 5 %   |
| Control of nostrums .....      | 50    | 5 %   |
| Care of Sick Poor .....        | 50    | 5 %   |
| Food—                          |       |       |
| Adulteration .....             | 0     | 0 %   |
| Sanitation .....               | 10    | 1 %   |
| Milk—                          |       |       |
| Adulteration .....             | 3     | 0.3%  |
| Sanitation .....               | 17    | 1.7%  |
| Nuisances—                     |       |       |
| Privy sanitation .....         | 60    | 6 %   |
| Housing .....                  | 20    | 2 %   |
| Plumbing .....                 | 10    | 1 %   |
| Nuisances .....                | 10    | 1 %   |
| Refuse removal .....           | 0     | 0.0%  |
| Fly and mosquito control ..... | 10    | 1.0%  |
| Infant Mortality—              |       |       |
| Nurses .....                   | 80    | 8 %   |
| Supervision of midwives .....  | 10    | 1 %   |
| Babies' boarding houses .....  | 5     | 0.5%  |
| Milk stations .....            | 5     | 0.5%  |
| Consultations .....            | 20    | 2 %   |
| Prenatal clinics .....         | 10    | 1 %   |
| School Inspection .....        | 80    | 8 %   |
| Contagious Diseases—           |       |       |
| Home isolation .....           | 100   | 10 %  |
| Hospitalisation .....          | 50    | 5 %   |
| Immunization .....             | 50    | 5 %   |
| Venereal diseases .....        | 20    | 2 %   |
| Tuberculosis—                  |       |       |
| Nurses .....                   | 60    | 6 %   |
| Dispensaries .....             | 40    | 4 %   |
| Hospitalisation .....          | 40    | 4 %   |
| Total Points .....             | 1,000 | 100 % |

Finally, the county of Waterloo has been prepared for division for public health purposes into the approach to the 40,000 population basis suggested as the minimum supporting a full time M. O. H., and is here presented.



The mapping out of a suitably located 40,000 population for public health administrative purposes, proves to be a difficult undertaking owing to—

- (a) Railway facilities.
- (b) Good roads facilities.
- (c) County and township boundaries.
- (d) Provincial Board of Health District jurisdictions, and the
- (e) Necessity of not robbing adjacent "probable areas" for arranging similar administrative undertakings, for accessible populations to complete the necessary minimum required for finance.

It will be observed that the lower half of the county of Waterloo was chosen, with one township from the south of Wellington county and one half of a township from the north of Wentworth county, which is in Provincial Health District No. III.

The following data applies to the area selected:

|           | Municipality | Population | Rate per head | Amount for Public Health |
|-----------|--------------|------------|---------------|--------------------------|
| City      | GALT         | 16,000     | 75c.          | \$12,000                 |
| Town      | PRESTON      | 5,000      | 50c.          | 2,500                    |
| RURAL—    |              |            |               |                          |
| Town      | HESPLER      | 3,000      | 25c.          | 700                      |
| Village   | AYR          | 800        | 25c.          | 200                      |
| Townships | DUMFRIES     | 2,000      | 25c.          | 500                      |
|           | BEVERLEY     |            | 25c.          | 300                      |
|           | PUSLINCH     | 2,333      | 25c.          | 600                      |
|           | WATERLOO     | 3,000      | 25c.          | 750                      |
|           |              | 32,133     |               | \$17,550                 |

#### BUDGET—

|   |                                   |             |
|---|-----------------------------------|-------------|
| This population area will<br>in 1921 be 40,000. | M. O. H. Salary and Expenses..... | \$4,000.00  |
|   | 4 Nurses P. H. ....               | 5,000.00    |
|   | Stenographer Clerk .....          | 850.00      |
|   | Sanitary Inspector .....          | 1,000.00    |
|   | Personnel .....                   | \$10,850.00 |
| Administration and epidemiology.....            |                                   | 7,050.00    |
|   |                                   | <hr/>       |
|   |                                   | \$17,900.00 |

It is practicable but not probable, and a county officership is in my opinion negative for both, for the following reasons:

The M. O. H. cannot be omnipotent, which would be really necessary to act as school officer for so widely a distributed area, and the budget will not support more than one full time medical personnel.

In the appendix to this article is contained a city, town and county resume of financial data for the Province of Ontario.

In conclusion, may it be said:

1. Every Medical Officer of Health and every medical practitioner must urge the proper remuneration of Medical Officers of Health by municipalities.

2. Moneys must be obtained to carry on a modern public health programme.

3. Moneys obtained must be sanely spent—as indicated—for equipment, administration and activities, apportioned along lines worked out above in Tables IV. and V. by Robert Olesen, of the U. S. Public Health Service, and in Table VI. by Dr. Chapin, of Providence, R.I., and also in 1916, by Schneider, of the Russel Sage Foundation.

4. Conclusion number three applies just as much to small departments as in large centres, in so far as it suggests time allotment and channels promising remuneration by actual results in preventing disease, for even the personnel on one.

287 Kennedy Ave., Toronto.





## CITIES.

| Dist. | Under<br>D.M.O.H.   | Not under<br>D.M.O.H. | Popula-<br>tion. | Total Taxes<br>Income. | Pub. Health<br>Expenditure. | Rate per<br>Capita. | Fraction<br>Income. |
|-------|---|-----------------------|------------------|------------------------|-----------------------------|---------------------|---------------------|
| 1.    | St. Thomas<br>Border Cities—<br>Essex<br>Chatham<br>Sarnia          |                       | 17,209           | 349,595                | 3,297                       | .19                 | 1/106               |
|       |   | London                | 41,977           | 1,230,482              | 27,001                      | .64                 | 1/45                |
|       |   |                       | 15,030           | 337,059                | 2,211                       | .15                 | 1/152               |
|       |   |                       | 12,178           | 287,185                | 2,206                       | .18                 | 1/130               |
|       |   |                       | 58,421           | 1,422,001              | 11,266                      | .19                 | 1/126               |
|       |   |                       | 10,051           | 194,417                | 2,597                       | .26                 | 1/75                |
|       |   |                       | 11,768           | 241,009                | 6,763                       | .15                 | 1/134               |
| 2.    | Woodstock<br>Owen Sound<br>Stratford<br>Galt<br>Kitchener<br>Guelph |                       | 17,143           | 348,527                | 5,913                       | .35                 | 1/59                |
|       |   |                       | 12,558           | 276,925                | 3,616                       | .29                 | 1/77                |
|       |   |                       | 19,767           | 422,026                | 5,025                       | .25                 | 1/91                |
|       |   |                       | 16,974           | 337,179                | 2,671                       | .16                 | 1/126               |
| 3.    | Brantford<br>St. Catharines<br>Niagara Falls                        |                       | 28,725           | 602,961                | 9,852                       | .34                 | 1/51                |
|       |   |                       | 19,189           | 574,197                | 5,006                       | .26                 | 1/115               |
|       |   |                       | 12,434           | 290,234                | 2,243                       | .18                 | 1/129               |
|       |   | Toronto               | 489,681          | 20,234,656             | 600,180                     | 1.23                | 1/34                |
|       |   | Hamilton              | 110,137          | 2,570,564              | 33,801                      | .31                 | 1/76                |
| 4.    | Belleville<br>Peterborough  |                       | 12,345           | 242,360                | 2,103                       | .17                 | 1/110               |
|       |   |                       | 20,904           | 496,403                | 3,511                       | .17                 | 1/141               |
| 5.    | Kingston<br>Port Arthur<br>Fort William                             | Ottawa                | 104,007          | 10,861,222             | 94,608                      | .91                 | 1/114               |
|       |   |                       | 23,737           | 437,957                | 2,914                       | .12                 | 1/150               |
| 7.    |   |                       | 15,100           | 714,339                | 16,438                      | 1.09                | 1/38                |
|       |   |                       | 19,523           | 865,557                | 21,530                      | 1.10                | 1/43                |
| 8.    | Sault Ste. Marie  |                       | 20,529           | 483,238                | 3,895                       | .19                 | 1/124               |



## TOWNS, 5,000.

| Dist.            | Population. | Total<br>Taxes Income. | Public Health<br>Expenditure. | Rate<br>Per Capita. | Fraction<br>of Income. |
|------------------|-------------|------------------------|-------------------------------|---------------------|------------------------|
| 1. Ingersoll     | 5,278       | 81,621                 | 440                           | .083                | .00539                 |
| 2. Waterloo      | 5,105       | 118,194                | 463                           | .091                | .00392                 |
| 3. Niagara Falls | 9,876       | 188,718                | 1408                          | .143                | .00746                 |
| Dundas           | 5,078       | 67,547                 | 1915                          | .377                | .02835                 |
| 4. Trenton       | 6,107       | 97,288                 | 1362                          | .223                | .01400                 |
| Oshawa           | 9,748       | 171,161                | 2086                          | .214                | .01216                 |
| Barrie           | 6,775       | 135,476                | 1029                          | .152                | .0076                  |
| Collingwood      | 7,949       | 135,239                | 967                           | .122                | .00715                 |
| Midland          | 7,339       | 113,772                | 381                           | .052                | .00335                 |
| Orillia          | 8,058       | 165,119                | 1081                          | .134                | .00655                 |
| Lindsay          | 7,880       | 173,752                | 1532                          | .194                | .00882                 |
| 5. Smith's Falls | 6,356       | 119,725                | 587                           | .092                | .00490                 |
| Brockville       | 9,418       | 189,149                | 3689                          | .392                | .01950                 |
|                  |             |                        | 2/3 Garbage                   | .13                 |                        |
| Hawkesbury       | 5,276       | 43,518                 | 684                           | .130                | .01572                 |
| Pembroke         | 7,600       | 106,052                | 1317                          | .173                | .01242                 |
| Cornwall         | 6,918       | 92,081                 | 738                           | .107                | .00802                 |
| Renfrew          | 6,384       | 86,289                 | 4538                          | .710                | .05259                 |
| 6. North Bay     | 9,413       | 170,644                | 1672                          | .178                | .00980                 |
| Cobalt           | 5,181       | 171,270                | 1819                          | .351                | .01062                 |
| Timmins          | 6,643       | 69,260                 | 133                           | .099                | .00360                 |
| 7. Kenora        | 5,031       | 120,584                | 1996                          | .397                | .01655                 |
| 8. Sudbury       | 8,227       | 179,360                | 10407                         | 1.264               | .05802                 |





Board of Health Expenditures,  
1919.Taxes Imposed, 1918  
Municipal Income, 19181919  
Assessed Population

| Counties<br>District No. 3—(Continued). | Cities  | Towns<br>5,000 | Rural  | Cities     | Towns<br>5,000 | Rural     | Cities  | Rate<br>per<br>Head | Frac-<br>tion<br>In-<br>come | Rate<br>per<br>Head | Frac-<br>tion<br>In-<br>come | Rate<br>per<br>Head | Frac-<br>tion<br>In-<br>come |
|---|---------|----------------|--------|------------|----------------|-----------|---------|---------------------|------------------------------|---------------------|------------------------------|---------------------|------------------------------|
|   |         |                |        |            |                |           |         |                     |                              |                     |                              |                     |                              |
| Peel                                    | .....   | .....          | 20,207 | .....      | .....          | 416,061   | .....   | .....               | .....                        | .....               | .....                        | .04                 | 1/492                        |
| Welland                                 | 12,434  | 9,876          | 34,323 | 290,235    | 188,718        | 668,042   | 2,243   | .35                 | 1/59                         | 1,408               | 1/134                        | .24                 | 1/80                         |
| York                                    | 489,681 | .....          | 90,271 | 20,234,656 | .....          | 1,671,423 | 600,180 | .27                 | 1/81                         | .....               | .....                        | .09                 | 1/203                        |
| Wentworth                               | 110,137 | 5,078          | 23,104 | 2,570,564  | 67,547         | 426,720   | 33,801  | .16                 | 1/126                        | 1,915               | 1/35                         | .25                 | 1/621                        |
| District No. 4—                         |         |                |        |            |                |           |         |                     |                              |                     |                              |                     |                              |
| Durham                                  | .....   | .....          | 22,665 | .....      | .....          | 387,679   | .....   | .....               | .....                        | .....               | .....                        | .06                 | 1/289                        |
| Haliburton                              | .....   | .....          | 5,637  | .....      | .....          | 48,651    | .....   | .....               | .....                        | .....               | .....                        | .20                 | 1/44                         |
| Hastings                                | 12,345  | 6,107          | 34,585 | 242,360    | 97,288         | 479,403   | 2,103   | .17                 | 1/110                        | 1,362               | 1/71                         | .09                 | 1/158                        |
| Muskoka                                 | .....   | .....          | 15,606 | .....      | .....          | 159,215   | .....   | .....               | .....                        | .....               | .....                        | .08                 | 1/124                        |
| Northumberland                          | .....   | .....          | 29,081 | .....      | .....          | 412,667   | .....   | .....               | .....                        | .....               | .....                        | .10                 | 1/180                        |
| Ontario                                 | .....   | 9,748          | 30,995 | .....      | 171,161        | 509,646   | .....   | .....               | .....                        | 2,086               | 1/82                         | .05                 | 1/323                        |
| Peterborough...                         | 20,904  | .....          | 19,037 | 496,403    | .....          | 243,451   | 3,511   | .17                 | 1/141                        | .....               | .....                        | .07                 | 1/193                        |
| Prince Edward..                         | .....   | .....          | 15,192 | .....      | .....          | 254,125   | .....   | .....               | .....                        | .....               | .....                        | .05                 | 1/256                        |
| Simcoe                                  | .....   | 30,121         | 50,632 | .....      | 549,606        | 774,108   | .....   | .....               | .....                        | 3,458               | 1/159                        | .05                 | 1/279                        |
| Victoria                                | .....   | 7,880          | 18,786 | .....      | 173,752        | 296,301   | .....   | .....               | .....                        | 1,532               | 1/113                        | .07                 | 1/207                        |
| District No. 5—                         |         |                |        |            |                |           |         |                     |                              |                     |                              |                     |                              |
| Carleton                                | 104,007 | .....          | 15,450 | 10,861,222 | .....          | 210,808   | 94,608  | .31                 | 1/114                        | .....               | .....                        | .20                 | 1/70                         |
| Dundas                                  | .....   | .....          | 16,179 | .....      | .....          | 267,991   | .....   | .....               | .....                        | .....               | .....                        | .03                 | 1/584                        |
| Frontenac                               | 23,737  | .....          | 17,844 | 437,957    | .....          | 229,535   | 2,914   | .12                 | 1/150                        | .....               | .....                        | .05                 | 1/196                        |
| Glengarry                               | .....   | .....          | 18,075 | .....      | .....          | 232,240   | .....   | .....               | .....                        | .....               | .....                        | .08                 | 1/155                        |
| Lanark                                  | .....   | 6,356          | 24,734 | .....      | 119,725        | 355,206   | .....   | .....               | .....                        | 587                 | 1/204                        | .07                 | 1/214                        |
| Leeds                                   | .....   | 9,418          | 22,727 | .....      | 189,149        | 343,873   | .....   | .....               | .....                        | 3,669               | 1/51                         | .04                 | 1/491                        |
| L. & Addington                          | .....   | .....          | 17,367 | .....      | .....          | 267,418   | .....   | .....               | .....                        | .....               | .....                        | .12                 | 1/127                        |





# The Public Aspect of Tuberculosis\*

BY FRANKLIN ROYER, M.D., D.Sc.,

Executive Office, Massachusetts-Halifax Health Commission.

THOSE of us who have watched the trend of public health opinion over a period of twenty-five years have noted a good deal of change in the point of view concerning a number of communicable diseases. From an administrative standpoint, as far as most of our communicable diseases were concerned, we approached the public health programme with the thought that quarantine and the control of the individual infectious case would give the public protection. For a long time health officers looked upon the control of the so-called quarantinable diseases, together with the enforcement of certain sanitary regulations concerning plumbing and garbage disposal, as the whole field of public health work.

With the great tuberculosis promotion campaign coming on in the 90's, and becoming intensive in the early 1900's, many health officers held aloof. Knowing that tuberculosis was widespread, that it reached into nearly every family in the community and that quarantine, the only protective method they knew, would mean almost universal restriction, they naturally hesitated.

General practitioners with a tendency to specialize upon diseases of the chest led the way, and naturally, having their minds set on diagnosis and treatment, and their whole training along the line of curative medicine, they featured the clinical side and scientific and bacteriological or the diagnostic side. Few of these early writers were competent to approach the subject from a broad gauge public health viewpoint.

Mistakes were made, of course. I have a very clear recollection of promises made by some tuberculosis workers, that given an abundance of sanatorium beds, tuberculosis could be wiped out in fifteen years. Think of it! and largely by curative measures.

Under this stimulation enormous sum were appropriated and many sanatorium beds were provided. Usually they were planned to take only early and incipient cases of the disease and to cure them. After about ten years of this sort of activity it began to

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\*An address before the Nova Scotia Health Officers' Association, at a public meeting in Kentville, July 6th, 1920.

dawn on the clinicians themselves, and the sanatorium workers accumulating by this time to large numbers, that something was wrong; that it was a very pretty promise in theory to talk about incipient cases, but quite another thing practically to get them. It was found that about 5% of the cases sent in by the average practitioner could by a little stretch of the imagination, be called incipient. It was found that by appointing and using a series of specially selected examining physicians at strategic points, or by suitably grouping clinics and admitting through them, they could get about 12% of incipient cases, about 30% of moderately advanced, and the remainder, about 68%, far advanced, and in the latter class reside the dangerous.

Next came the great agitation against spitting. The open case was considered a tremendous menace to society, and actual persecution of the tuberculous individual was noted in many sections of the country. Phthisiophobia ran rampant. House infection was considered the great casual factor, and many adults breaking down with the disease were said to have been infected by living in a room previously occupied by some tuberculous person, dying of it, or infected through carelessness of some fellow workman.

About this time physicians became greatly agitated over the use of tuberculin. The medical profession, notwithstanding Koch's premonitory advice, insisted upon believing that tuberculin would, in some mysterious way, act against tuberculous infections as diphtheria anti-toxin acts specifically against diphtheria infections. Thousands of individuals were injected with tuberculin, the doctor making the injection usually having no clear comprehension as to how it might work. Many tuberculous persons were sacrificed where tuberculin was injudiciously used.

I would not have you believe that tuberculin has not been of real value, because it is only by its use in the hands of specially trained persons with large numbers available for testing that we have been able to prove definitely and confirm pathological observations that tuberculosis is well nigh universal. It is only by careful tuberculin tests, by deep injection, by skin, or eye test that we have been able to know the period of life when infection takes place. I have several married friends who are themselves tuberculous, and whose children were born and brought up in an atmosphere known to have a tuberculous occupant. These medical gentlemen have tested their own children from time to time for the purpose of determining and proving when they became infected.



By means of tuberculin tests then, we have been able to prove that most persons are infected early in life, and perhaps 90% by the fifteenth year of life. We look upon the curative power of tuberculin to-day as slight. Trudeau's mandate is safe, viz.: that it has no value whatever, except in a case of a chronic tuberculosis not going on to complete healing. Here a minute dose given during intervals when the individual apparently makes no improvement, may occasionally stimulate reparative processes and may help push the patient on a little way along the road to arrest or cure.

This teaching was in turn followed by agitation for sanatorium care for every tuberculous person. Perhaps the leaders of this fad, a sanatorium bed for each tuberculous person, were most active in England, but it was preached a good deal on this side of the water.

Most of these extreme views were put forth by persons not actively engaged in administrative public health work, and most of those putting forward the view had no accurate conception of the universal prevalence of tuberculosis, or the real period in life when infection occurs. Few of them had practical notions as to exactly how infection occurred.

Stewart, of Winnipeg, in a splendid paper from which I have culled modern views, has this terse paragraph:

"Tuberculosis is a human noxious weed lying latent in practically all human soils, finding its opportunity for growth in some bit of bad human husbandry, some over-strain, some over-fatigue, some dissipation, some neglect, some lowering of vitality through illness. When one presents himself with signs of tuberculosis, we do not trouble to inquire about infection. We inquire as to the particular kind of bad farming, the particular cause of breakdown."

By a natural evolution we have come to look upon the whole question of tuberculosis from a more rational viewpoint. We concede now that children of the tuberculous are apt to be born entirely free from infection; that the child of the tuberculous parent may have certain inheritances, such as susceptible tissues, in which the organisms may find less resistance than in others; but we concede that the infection takes place because of the environmental conditions, from an open case in the home, or from infection disseminated recently over carpets or rugs, over floors, or introduced through food infected in the home, or first infected prior to receipt.

We concede that most children are infected very early in life in the creeping and walking stage; that there is almost universal infection by fifteen, that the infection is proportionate to the viru-

lence of the germs taken in, and is apt to be proportionate to the size of the dose of infection. Particularly susceptible babies and young children may promptly sicken and die, some from meningitis, some from pneumonia or peritonitis, some from bone infection of generalized abscesses. The majority of these infancy and childhood infections are certainly the majority of spontaneously cured, however, and perhaps some resistance to further infection is created through spontaneous cure comparable to a certain extent to immunity and a direct result of this childhood infection.

When we hear of an adult being acutely sick with tuberculosis, we do not ask anyone where did he acquire the disease. On the other hand, we ask what has he been doing to permit his resistance to be lowered? What has he done to allow the infection to run riot in his tissues? Has he been overworking with repeated fatigue? Has he been needlessly exposing himself to bad weather conditions or repeatedly catching colds? Has he been eating and drinking to excess. Has he been indulging in physical or sexual excesses? Has he suffered from any continued fever? Has he been under unusual physical or mental strain?

In this connection let me say, there is peculiar significance in the acute tuberculosis that occurs in girls about puberty when menstruation first bring an unusual drain on the girl's tissues; in boys of the same age when illicit sex activity or masturbation may cause a lowering of tissue resistance. There is marked significance in the breakdown that occurs with consummation of marriage and the excessive venery so common in the newly married, or with those in early adult life indulging in sexual excesses out of wedlock. There is significance in the breakdown that occurs when boys and girls leave school to take up the hard physical or confining labour of shop or mill. All of these are examples of lowered resistance serving as the casual factor in the acute lighting up of tuberculous processes in persons who may have acquired infection many years earlier, usually in childhood.

Unemployment, with its resultant bad feeding, may at any age permit the same sort of drop in resistance to tuberculous invasion.

To-day, the public health worker looks not upon infection as the immediate cause of the breakdown in adolescent life. This officer knows that the breakdown is in all probability remote, and may bear no near relation whatever to the date of infection.

How, then, shall he approach the question from a public health standpoint? What shall be our method of attack? With these views squarely before us, how shall we acquire knowledge, first, of



the chief symptoms of the disease upon which a diagnosis may be based? How shall we determine what may result from residence in a house with an open case? How much of our programme shall be aimed at control and management of the individual case, including, of course, his re-education? How much of his re-education may be brought about through clinics and public health nurses? How far shall we utilize the sanatorium in this purpose? What shall we do with the open case in houses where the sick cannot be kept away from the well, particularly, if the well be of child age or infant age? What shall we do about teaching those who are in humble circumstances in life, or who are necessitous, in order that we may best protect the community? How much of this work shall be done by bureau officials and public teachers? How much by private philanthropy? What part of our programme shall eventually be carried by state agencies? What portion by the smaller units? Whence are we drifting? These are suitable problems for discussion before a group of health officers.

Our programme should be worked out with certain definite aims and objects in view, and once having been agreed upon, all helpful agencies should be co-ordinated and strive to work along this line. It is only by co-ordinated group effort and team work that lost motion may be taken up, that overlapping may be eliminated and an efficient programme be promulgated.

In discussing our method of attack from a public health standpoint I shall say little on the first question referring to methods of getting knowledge of the case and the points for determining the early diagnosis because Dr. Craig, who is to follow, will develop this phase of the subject very much better than I could do.

As to health procedure with an open case resident in a house, the health officer or educator has to determine his line of action in each individual case after a full investigation has been made. With cleanly individuals fairly well housed, his first concern is that a far advanced case may sleep and live most of the time in open rooms separated from other members of the household. With no children in the dwelling, such person may not necessarily be removed from the residence, the adults in the household having already been infected years ago, they need only be taught right methods of living and to have full appreciation of what lowers individual resistance.

Treat all adults in the household as passive cases of latent tuberculosis likely to become active with individual resistance greatly lowered. Use all precautions for collecting and destroying sputa,

minimize every household danger from the case, but do not go into hysterics about removal of the case. The danger that has been done and that is likely to be done is always susceptible of corrective treatment by education and proper re-arrangement of social conditions in the household.

What shall we say where infants or children reside in the household? From present knowledge we know that the young child is easily infected, and is more apt to succumb to acute disease shortly after the initial dose, especially if massive has been acquired, especially if the dose has been a large one, hence, with the average far advanced case in the home of a humble citizen where household isolation and segregation cannot be carried out, with the careless case and a child in the household, hospitalization or sanatorium care should be urged.

The management of each individual case of tuberculosis is very largely a matter of safe adjusting of social environment and re-education of the individual, both as to the care of himself and those with whom he associates. Make the patient see how he becomes a menace to others; what he must do in order to protect others; make him see how acute disease, tuberculosis, came about because of lowered resistance; make him appreciate what lowered his resistance and gave opportunity for his latent disease to become active. With these facts instilled in the mind of the patient, and the nurse to follow on as a check upon the patient's absentmindedness, forgetfulness, and failure to grasp the whole lesson we have done what is essential for those who are inclined to be careful.

Every city and populous town, the county seat in every county, and the largest centres of population should have an educational tuberculosis clinic or health centre. In such a clinic, from time to time, all suspected of being tuberculous, the large horde who entertain old-fashioned notions and depend upon medical remedies for cure, might be gathered for careful examination, classification and instruction. From this educational centre, nurses would work into the homes of all who need instruction and re-education. Such centres are commonly called T. B. clinics or county clinics. Within the last few years the word health centre has been very generally applied to this sort of educational centre.

Many individuals may receive from such a centre through its medical and nursing corps and through literature distributed from this source, the necessary re-education to effect a cure, if cure be possible, and how to protect those about them where the individual is highly infectious. It is always extremely difficult to re-educate



a man of meager early education, and who comes from a humble walk of life. Persons most likely to get well may re-adjust themselves to right environment and re-educate themselves very much quicker by residence in a sanatorium for a period of at least from three to six months. If, perchance, the individual receiving sanatorium treatment does not go on to cure, the re-education has, at least, made him less a menace to those about him during the remainder of his life.

If the actively tuberculosis individual be necessitous, he should undoubtedly be sent to the sanatorium, or if far advanced, to the hospital, and ample provision should always be made to advise and treat the necessitous first.

I fear too often treatment is planned for those who may bear all or a portion of the expense, and that the dangerous and necessitous get sanatorium help with too great difficulty.

Just how much of the work shall be done by governmental agencies and how much by private philanthropy is a debatable question. In many parts of England, and in some other parts of the world, notably in the English colonies of the Pacific, they are coming to pay for all institution care out of the rates. It has been the custom in this country to develop most institutions in large part by private philanthropy, and eventually to have them supported in whole or in part by public grant.

Each Province will have to work its own programme. I am inclined to think, however, that the Government will more and more have to shoulder full responsibility and bear the full burden of hospital and sanatorium care for the necessitous; and that private philanthropy and private charity will more and more be devoted to the comfort and relief of special cases and to developing popular new charities.

Believing, as we now do, that tuberculosis is almost wholly the result of faulty social conditions, and incidentally only of physical conditions, we naturally then include with the tuberculosis programme every form of human welfare. A good housing campaign may do as much for tuberculosis in the community as an active tuberculosis campaign. Child welfare campaigns aim to improve the very conditions in every home that are responsible for tuberculosis. Right methods of living, campaigns of ventilation, medical and nursing school supervision, and model schools with nutrition and posture clinics and essential sanitary details worked out completely all have tremendous bearing on the incidence of tuberculosis.

Those who wiped out the saloon and lessened the chance for alcoholic dissipation, doing so largely on moral grounds, and for lessening poverty, have undoubtedly contributed in very large measure toward the tuberculosis programme.

What we should do then is join together for an intensive campaign of improving public health conditions generally. Let us multiply clinics where suitable health advice may be given. Let us be prepared to give every woman untrained in sanitary science opportunity to obtain free advice concerning the matters in her household that directly effect the health of her family. Let us lead expectant mothers to solicit such advice, but first let us also lead the housewife to the point where she sees the advisability of soliciting health information. Let our public health programme begin with prenatal care and carry on to the end of the productive period of life; then and not till then, will we be doing our full public health duty in lessening the prevalence of tuberculosis.

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## The Victorian Order of Nurses

### The Establishing and Re-Establishing of Breast Feeding

EDITH HASLAM, R.N.V.O.N.

**I**N 1919 it was my privilege to observe the splendid work for the stimulation and restoration of this function as demonstrated by Dr. Truby King and his wonderful nurse assistant in the little hospital at Earl's Court, London, England.

My position as Superintendent of an Infant Welfare Centre prevented my taking the course in Infant Feeding and Care being offered, but since the work was closely affiliated with the maternity and child welfare work in London, I was able to closely observe the progress of many of our mother members who were referred from our centre to Earl's Court. Breast feeding was successfully maintained in most cases and in other partially—even when weaning had taken place many weeks before. Once a nurse has a clear grasp of the principles necessary for success, and is sure of the fact that every mother can nourish her offspring in the natural way, with those rare exceptions which merely prove the rule, she will find immense encouragement in almost every case she undertakes. The following rules are given the mother, and in a few days the increase of breast milk fully repays the efforts made:

1. A hopeful and determined point of view on the part of the mother.
2. Absolute regularity of feedings with no night feedings.
3. The mother to take a drink of water, milk, cocoa or weak tea before *each* feeding.
4. Personal hygiene—a daily sponge or full warm bath and a satisfactory daily bowel movement.
5. The mother to sit before two bowls of water—one hot and one cold, each with its own wash-cloth and to bathe the breasts alternately until a pink surface results—drying of the nipples is of great importance as cracks are liable to occur if they are left damp.
6. Massage of the breasts toward the nipples to stimulate the blood-flow.

Prenatal care to-day insists upon the importance of at least six glasses of water each day, and all nurses know the argument for breast feeding well enough to need no emphasis here. That her

baby will be a happy, healthy member of the family if his routine and digestion receive the same thoughtful care which is given other departments of household science, is a fact which is gradually being recognized by mothers of all grades to-day.

Regarding the function of breast feeding, Dr. Truby King gives us some telling facts in his "Natural Feeding of Infants," and his "Feeding and Care of Baby." The baby should be put to the breast within six hours of birth for a period of less than two minutes to stimulate the secretion of milk and failure of milk supply is often due to the nurse not putting the baby to the breast soon enough and not persevering.

"During the first week baby should have both breasts at each nursing, sucking each breast at first for under two minutes, the second day for three minutes, and so on. Prolonged suckling, at first, is apt to cause tenderness and cracking of nipples. Mothers are generally told that after the first week baby must have only one breast at each nursing—the breasts being used alternately. This is right where the mother has plenty and baby gets all he needs from one breast. But where this is not the case—where the supply falls short of what is needed, and one breast does not furnish enough for one feeding—baby should certainly be put to both sides at each suckling, the right breast being used first at once feeding time and the left first at the next. This is the best means of stimulating the secretion of milk, from eight to ten minutes being allowed for each breast. In any case the breast first suckled should be emptied, but with an increasing supply less and less time should be allowed in regard to the second breast, and if the supply becomes ample, only the one breast should be used at each nursing."

Absolute regularity of feeding times gives the gland the education necessary and prevents the exhaustion consequent upon irregular and too frequent working. Dr. D. C. Cameron, of London, says, "Women are too apt to look upon the secretion of milk as something which they themselves give their babies. It would be more true to regard it as something which the healthy child provides for himself. If the breast is emptied completely, it fills again, as it were, to the same level and a little beyond. If, from weak sucking it is not emptied, the milk falls off in quantity and quality alike."

Three hourly feedings are generally considered best up to the age of six months, then four hourly intervals are quite successful, many infants thriving on four hourly feedings from birth. Regarding "night feedings," Dr. Truby King says, "Nothing in the



history of modern baby-feeding is more strange than the way in which humanity seems to have jumped to the conclusion that a young infant needs 'night feeding' without ever pausing to consider whether the procedure is really a natural and proper one—ignoring the fact that darkest night is the appointed period for the most profound rest and the deepest sleep, and that it is not customary for the young of other mammals to be suckled at this time."

The baby should be fed only six times in 24 hours (say at 6 a.m., 9 a.m., 12 noon, 3 p.m., 6 p.m. and 10 p.m.) ; this ensures an undisturbed night's rest to the mother, and establishes the baby in its proper rhythm from the start, saving it from the period of irritability, disturbed rest, and slackening of growth incidental to the breaking of a bad habit a few months later. Both in England and Canada the writer has had the father thank her for making it possible for the whole family to sleep all night by following this "no night feeding" rule, and the improvement in the physique of both mother and baby has been well worth while.

In St. John many babies are now on "full time" breast milk who were on the point of being weaned. Faithful adherence to the rules is alone responsible for this.

In those cases where the infant is not thriving on the breast a "test feed" will provide a guide as to how much the infant is getting in twenty-four hours. We use an ordinary pair of grocer's scales which we send into the home and carefully explain the process. The baby is weighed, fully dressed, before and after each feeding for twenty-four hours, and a record of the difference in the weight kept by the mother. A three months old baby recently, weighing two pounds below normal, showed that he was only getting 9 ounces in 24 hours by this method. The family doctor was consulted and a formula was given after each nursing. The two pounds were gained in six weeks and to-day he is a Canadian to be proud of. This method of mixed feeding has its dangers of course and as Dr. Cameron says, "It too often happens that so soon as the child experiences the easily-running bottle he instinctively refuses the difficult breast. Moreover, if the difficulty be due to insufficient appetite, we shall not benefit matters by satisfying a part of that appetite by artificial means. So much he less will be left for the breast. For these reasons we must always consider the matter very carefully before we advise mixed feeding. Speaking generally, it is a course which is often too lightly entered upon, and

which is in many cases directly responsible for the drying up of the breast and the institution of bottle-feeding."

Professor Pinard, of Paris, says, "It has been proved that when a baby is given some cow's milk, he digests it much better if, previous to the taking of the cow's milk, he has been given even a very small quantity of mother's milk."

On the other hand, Dr. Truby King says, "Where a breast-fed baby is not doing satisfactorily, and there is any doubt as to whether he is getting the right quantity of food, the rule should be absolute to weigh him before and after each nursing for 24 hours, and not trust to guessing. In a large proportion of cases it would be found that the baby was taking too much, where the mother or nurses had come to the conclusion that he needed more."

Another cause for joy was the case of a young mother whose baby was having a very unhappy time with his bottle. Weaning had taken place ten days before and to-day a plentiful supply of breast milk is the result of three weeks' struggle both of mother and nurse and the baby is thriving happily.

If we can restore the sacredness of this function in the minds and hearts of our Canadian women and help them to become whole mothers, our work among them will bring its own reward in the knowledge that we are doing our small part in increasing the strength and vitality of the rising generation.

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# The Membership Enrolment Campaign of the Canadian Red Cross Society

"THE CRUSADE FOR GOOD HEALTH."

BY DR. A. H. ABBOTT, *General Secretary Canadian Red Cross Society.*

THERE are two very different aspects to the Membership Enrollment Appeal of the Canadian Red Cross Society. The one is the *official* aspect, beginning with the commendation of the medical and public health experts of the world. The peace-time work of the Red Cross, as suggested by these experts, met with the approval of the statesmen who drafted the Covenant of the League of Nations, and received the approval of the Canadian Government, both when the representatives of Canada signed the Covenant of the League of Nations and when our Parliament amended the charter of the Red Cross Society to include peace-time activity. The official aspect of the campaign is one in which resolution upon resolution can be quoted, but this has already received a good deal of attention and, therefore, may be taken for granted in this article.

The other aspect of the Membership Enrollment Appeal is distinctly *human*. It deals not with resolutions and documents, but with people, and therefore it may be presumed to be both more interesting and more fundamental in its considerations. We meet the human problem first in the fact that the Red Cross Society is a *voluntary* organization.

There is a sense in which the inclusion of Article XXV. in the Covenant of the League of Nations is dependent upon the fact that it was accepted that a voluntary organization could do valuable work in the field of public health. The reason for this conviction may possibly be found in the work which the Red Cross and other voluntary bodies were able to do as auxiliaries to the Government agencies during the war, but whatever the reason, the fact remains that the nations which have signed the Covenant of the League of Nations have agreed "to encourage and promote the establishment and co-operation of duly authorized voluntary national Red Cross organizations, having as purposes the improvement of health, the prevention of disease and the mitigation of suffering throughout

the world," and that means that an organization not definitely under the control of the Government is authorized to work in the field of public health. It is also significant that the nature of the co-operation to be effected is left to the good sense of the Red Cross Society. There is, however, one remark which may be made with complete confidence on the basis of the experience gained through the war; namely, no voluntary organization which ignores public opinion, can hope to go very far in its work, the support of public opinion being vital to maintaining its activities. Therefore, since the Red Cross Society has been called upon as a voluntary organization to co-operate with Government agencies in the field of public health, it in turn must appeal for public support, and hence it makes its Membership Enrollment Appeal.

But there are other reasons. Any recognized voluntary organization making an appeal to the general public represents the conviction of a number of people that the purpose for which it stands would, in its accomplishment, be for the welfare of the people. The Red Cross Society, therefore, represents, in the first instance, a certain body of public opinion in favor of the improvement of health and the prevention of disease. Its purpose is to make that body of opinion, as nearly as possible, coincident with the citizenship of Canada. That is, behind the Membership Enrollment Appeal, there is the purpose for which the society exists as a peace-time organization, "the improvement of health and the prevention of disease." It is obvious that this can be accomplished only as the people of Canada are educated to the point where they are interested in this purpose, and where they live according to the fundamental principles which make the improvement of health and the prevention of disease possible of accomplishment. Hence, the Membership Enrollment Appeal of the Red Cross is, first of all, an educational campaign for good health.

It is a fact that the modern medical man would rather prevent than cure disease. It is also true that the great majority of our citizens do not give the family doctor much opportunity to practise the prevention of disease. He is called in after the patient has shown more or less alarming symptoms. Modern medicine can practise according to its ideal only as the people grasp the idea that "Prevention is better than Cure" can be applied to disease as well as to other things. Hence, membership enrollment in the Red Cross is a step toward the realization of the medical ideal.

As the Red Cross Society sets out upon this peace-time mission, it wishes to reach the largest number of people with its message,



and to convince them, if only to the extent that they are willing to be taught, that the health of Canadians may be improved. Its message is that scientific discovery has placed in our hands the knowledge which, if put into practice, will result in the improvement of health. Therefore, it requires but the bringing of scientific information, expressed so that they can understand, to interested people, to lead to at least a beginning in this good work. This is the foundation of "The Crusade for Good Health."

The Red Cross Society does not claim to have any special knowledge—it relies upon medical and public health experts for that. It does not have a programme except as that may be expressed in the most general terms. It is not required to initiate the movement, for the public health services of Canada have already made a splendid beginning, and have accomplished a very great deal, and voluntary organizations have made substantial progress in educational work for better health, especially in specialized fields. It does claim, however, the right to pass on to the people the knowledge which they need in order to practise personal, family, and community hygiene. It believes that by enlisting the sympathy and interest of hundreds of thousands of our citizens, which it hopes to do by making them members of the Red Cross Society, it will tend to foster and extend public opinion in favor of sane and progressive health measures and in favour of an extension of the public health services to such an extent that what is now the knowledge and practice of a few may become the knowledge and practice of the majority of our people.

Nor must the place of the Junior Red Cross be overlooked. The organization in the schools of Junior Red Cross auxiliaries, through whose activity the actual practice of personal hygiene is encouraged, will mean that the next generation will be better informed on health matters and also better trained in good health habits, and consequently health is likely to occupy a more prominent place in the interest of the nation than it has occupied in the past.

"The Crusade for Good Health" appears on all the literature of the Red Cross Society, and it is hoped that the phrase will express more and more, both in earnestness of purpose and in recognition of the righteousness of the cause, the real spirit of Red Cross service.

The Canadian Red Cross Society has expressed its desire to co-operate fully with all Government authorities, Federal, Provincial and Municipal, working in the interest of public health. This

it does by asking that it may be used. It has also shown its readiness to co-operate with other voluntary bodies working in the field of public health by the assistance which it has given them. It seeks to supplant none—it wishes to strengthen all. It strives only to make its service mean the most that voluntary service can mean in the realm of public health, to the people of Canada.

When it says, "Join the Canadian Red Cross," it appeals in no self-seeking spirit, for it believes that those who pay their dollar and thus express their interest in the cause for which it stands, will thus join the forces which are working for "the improvement of health, the prevention of disease and the mitigation of suffering throughout the world." When the universal enrollment of our people becomes an accomplished fact, much will have been done toward the making of Canadians a healthier, happier and more efficient people.

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## News Items

New Brunswick Health Week, held during the week commencing April 25th, was an unqualified success. The speakers included in addition to Hon. Dr. Roberts, who seemed as usual to be sufficiently energetic and enthusiastic to be omnipresent, Dr. John Amyot, Deputy Minister of Health, Ottawa; Dr. Helen MacMurchy, Chief of the Child Welfare Division, Ottawa; Dr. Alexander Fleisher, Assistant Secretary, Metropolitan Life Insurance Company, New York; Dr. Geo. D. Porter, General Secretary of the Canadian Association for the Prevention of Tuberculosis; Mr. Norman Burnett, of the Canadian National Committee for Mental Hygiene, and Dr. Gordon Bates, General Secretary of the Canadian National Council for Combating Venereal Diseases.

The speakers delivered addresses during the week at practically every important town and city in the province. The meetings were largely attended and enthusiastic, newspaper support was all that could be desired, and general public interest very marked. It is hoped that a more extended description of this somewhat unique and successful demonstration of how to deliver public health education in large doses will appear in an early issue of the PUBLIC HEALTH JOURNAL. Meanwhile New Brunswick and Dr. Roberts are to be congratulated.

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Miss Edith Haslam, R.N., who served overseas during the war, and later worked under Dr. Truby King in London in 1919, has been appointed Child Welfare Director of the Victorian Order of Nurses in St. John, N.B.

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Under the auspices of the Women's Canadian Club of Saint John, N.B., Dr. Helen MacMurchy, who was in the Province for the New Brunswick Health Week, gave an eloquent address before a crowded house, on the subject "The Canadian Mother."

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On Wednesday, April 27th, 1921, a Provisional Child Welfare Association was formed at Fredericton, N.B. Dr. Helen MacMurchy addressed the meeting. As mentioned in its constitution the object being to unite, to co-ordinate and to foster the Child Welfare activities of the Province. Mrs. W. A. Ferguson, of Monc-

ton, was elected President. Mrs. Ferguson is a woman with high ideals, splendid ideas, and a born leader, and one who is richly endowed with that outstanding gift of common sense. The officers of the new organization are: Patron, Mrs. Wm. Pugsley; Hon. President, the Countess of Ashburnham; Hon. President, Dr. C. C. Clark; President, Mrs. W. A. Ferguson, Moncton; 1st Vice-President, Dr. Doris Murray, St. John, N.B.; 2nd Vice-President, Mrs. W. G. Clark, Fredericton; 3rd Vice-President, Mrs. David Martin, St. Leonards; 4th Vice-President, Mrs. Charles Comben, Woodstock; 5th Vice-President, Mrs. Marks Mills, St. Stephen; Secretary, Miss J. K. Stewart, Fredericton; Treasurer, G. W. Taylor, Fredericton.

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Have you sent in a report of your Child Welfare work? If not, you are invited to do so. No work is too small or too new to be of interest. Reports to date have been received from: London (Ontario) Child Welfare Association; Provincial Board of Health, Ontario; Provincial Board of Health, Nova Scotia; Child Welfare work under the Red Cross Society in Prince Edward Island; Hamilton Patriotic Fund Clinic; Massachusetts-Halifax Commission; Report of Formation of British Columbia Child Welfare Council; Child Hygiene Nursing under Provincial Board of Health, Manitoba; Report of Formation of Child Welfare Council, New Brunswick; Report of Child Welfare work, New Brunswick; by a Red Cross nurse; Work at the Evansville Playground, Stellarton, N.S. Address Child Hygiene Section, Canadian Public Health Association, 206 Bloor Street, Toronto.

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On Friday, April 29th, a largely attended meeting was held at St. John, New Brunswick, for the purpose of organizing a New Brunswick branch of the Canadian Association for the Prevention of Tuberculosis. Following an address by Dr. Geo. D. Porter a Nominating Committee was appointed consisting of Mrs. M. B. Edwards, Dr. Murray McLaren, R. T. Hayes, W. E. Scally, Mrs. R. J. Hooper and Hon. Dr. W. F. Roberts. The names of the officers will be announced later.

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An interesting piece of work is being carried on at the Evansville Playgrounds, Stellarton, Nova Scotia. This is a new undertaking of the Acadia Coal Company in one of the mining sections of Stellarton and the company's aim is the betterment of living conditions for its employees.



Through the Playground an effort is being made to reach the children, and it is hoped that by fostering continually in work and play higher ideals in the children, they will have higher conceptions of home and community life.

A few years ago the families in Evansville were mostly of foreign birth, and some of these of a low moral type, so that quite a problem was presented. However, during the last two or three years many of these have moved away and there has been a decided change for the better. Yet as this section is somewhat isolated from the town proper it seemed fitting to begin the work here, where, owing to the distance from the town schools as well as indifference on the part of some parents to the welfare of their children, boys and girls who should be in school are on the streets. It is hoped that by forming habits of regular attendance at the Playground the smaller children will have a desire to keep on at school when they become of school age.

The work as begun in January of this year combines the activities of both kindergarten and playground. A building has been fitted up with wide verandahs, two large rooms for work and play, a smaller room where the sand table is, cloak rooms and toilet. A very comfortable and cosy rest-room has also been provided for the two workers in charge.

With the warmer weather it is hoped to open an outdoor playground, but during the winter months the children are within doors the greater part of the time, though it is made a rule to have them out at least a half hour each day, and when the weather has been favourable the workers have taken them on short walking and coasting excursions.

The group age in attendance is three to seven years, with an enrollment of thirty-six.

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At Moncton, N.B., on Tuesday, April 26th, a New Brunswick branch of the Canadian National Council for Combating Venereal Diseases was organized with the following officers: Patron, Lieut.-Governor Wm. Pugsley; Hon. President, Sir J. Douglas Hazen; President, W. B. Snowball, Chatham; 1st Vice-President, Dr. A. R. Landry, Moncton; 2nd Vice-President, George Clark, Fredericton; Secretary, Dr. G. J. Oulton, Moncton; Treasurer, W. A. Lockhart, St. John. Dr. Gordon Bates addressed the organizing meeting outlining the duties of various committees of the Council and describing work already accomplished in various parts of Canada.



# The Provincial Board of Health of Ontario

## COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF MARCH, 1921.

### COMPARATIVE TABLE.

| Diseases.                       | March,<br>1921. |         | March,<br>1920. |         |
|---------------------------------|-----------------|---------|-----------------|---------|
|                                 | Cases.          | Deaths. | Cases.          | Deaths. |
| Small-pox .....                 | 526             | 3       | 446             | 7       |
| Scarlet Fever .....             | 436             | 16      | 560             | 29      |
| Diphtheria .....                | 447             | 47      | 451             | 56      |
| Measles .....                   | 238             | 4       | 1,256           | 23      |
| Whooping Cough .....            | 237             | 19      | 136             | 31      |
| Typhoid .....                   | 30              | 11      | 27              | 7       |
| Tuberculosis .....              | 181             | 13      | 213             | 173     |
| Infantile Paralysis .....       |                 | 6       |                 |         |
| Cerebro-Spinal Meningitis ..... | 9               | 5       | 7               | 1       |
| Influenza and Pneumonia .....   | 78              | 42      | 3,053           | 734     |
| Primary Pneumonia .....         |                 | 315     |                 | 602     |
|                                 | 2,182           | 602     | 6,143           | 1,663   |

## VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR MARCH, 1921.

|                  | 1921<br>Cases. | 1920<br>Cases. |
|------------------|----------------|----------------|
| Syphilis .....   | 211            | 64             |
| Gonorrhoea ..... | 157            | 77             |
| Chancroid .....  | 10             | 8              |
|                  | 378            | 143            |



# CASES AND DEATHS FROM ENCEPHALITIS LETHARGICA (SLEEPING SICKNESS) FOR THE MONTH OF MARCH, 1921.

|                                |         |
|--------------------------------|---------|
| Lambton County—Plympton .....  | 1 case  |
| Middlesex County—London .....  | 1 death |
| Wellington County—Arthur ..... | 1 death |

## SMALL-POX CASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF MARCH, 1921.

| County                     | Municipality         | Cases | Dths. | County                      | Municipality        | Cases | Dths. |
|----------------------------|----------------------|-------|-------|-----------------------------|---------------------|-------|-------|
| Brant—Brantford .....      |                      | 15    | ..    | Ontario—Rama .....          |                     | 3     | ..    |
|                            | Oakland .....        | 1     | ..    |                             | Uxbridge Tp. ....   | 1     | ..    |
| Bruce—Wiarton .....        |                      | 2     | ..    | Oxford—Woodstock .....      |                     | 2     | ..    |
| Carlton—Ottawa .....       |                      | 168   | ..    | Parry Sound—Parry Sound     |                     | 16    | ..    |
|                            | Nepean .....         | 7     | ..    | Perth—Elma .....            |                     | 1     | ..    |
| Dufferin—Melancthon .....  |                      | 1     | ..    |                             | Listowel .....      | 1     | ..    |
| Elgin—St. Thomas .....     |                      | 21    | ..    | Prescott & Russell—         |                     |       |       |
|                            | Dunwich .....        | 15    | ..    |                             | Cumberland .....    | 1     | ..    |
|                            | Vienna Village ..... | 1     | ..    |                             | Clarence .....      | 7     | ..    |
| Essex—Essex Border .....   |                      | 3     | ..    | Prince Edward—Hellier ..... |                     | 3     | ..    |
| Frontenac—Kingston .....   |                      | 1     | ..    |                             | Pictou .....        | 1     | ..    |
| Grey—Sullivan .....        |                      | 1     | ..    | Renfrew—Renfrew .....       |                     | 11    | ..    |
|                            | Owen Sound .....     | 12    | ..    |                             | Horton .....        | 1     | ..    |
| Hastings—Belleville .....  |                      | 10    | ..    |                             | Raglan .....        | 8     | ..    |
|                            | Marmora Tp. ....     | 1     | 1     |                             | Bagot & B. ....     | 2     | ..    |
|                            | Trenton .....        | 4     | ..    |                             | Eganville .....     | 4     | ..    |
|                            | Deseronto .....      | 1     | ..    | Rainy River—Ft. Francis...  |                     | 1     | ..    |
|                            | Marmora Village ..   | 1     | ..    |                             | Midland .....       | 4     | ..    |
|                            | Tyendinaga .....     | 1     | 1     | Stormont, D. & Glengarry—   |                     |       |       |
| Kent—Chatham City .....    |                      | 4     | ..    |                             | Osnabruck .....     | 2     | ..    |
| Kenora—Grant Tp. ....      |                      | 2     | ..    |                             | Roxborough .....    | 4     | 1     |
| Lambton—Sarnia .....       |                      | 1     | ..    | Sudbury—Sudbury .....       |                     | 6     | ..    |
| Lanark—Dalhousie .....     |                      | 1     | ..    |                             | Hager .....         | 1     | ..    |
| Leeds & Grenville—         |                      |       |       | Thunder Bay—                |                     |       |       |
|                            | N. Crosby .....      | 1     | ..    |                             | Jack Fish (Ungd.)   | 2     | ..    |
| Lennox & Addington—        |                      |       |       | Temiskaming—Haileybury..    |                     | 9     | ..    |
|                            | Camden .....         | 1     | ..    |                             | Bucke .....         | 4     | ..    |
|                            | Adolphustown .....   | 1     | ..    |                             | Lumber Camp .....   | 1     | ..    |
| Middlesex—London .....     |                      | 12    | ..    | Waterloo—Kitchener .....    |                     | 11    | ..    |
|                            | Strathroy .....      | 1     | ..    |                             | Waterloo Town ..... | 1     | ..    |
|                            | Westminster .....    | 2     | ..    | Wellington—Eramosa .....    |                     | 6     | ..    |
| Muskoka—Bracebridge .....  |                      | 9     | ..    |                             | Garafraxa W. ....   | 3     | ..    |
|                            | Gravenhurst .....    | 1     | ..    | Wentworth—Hamilton .....    |                     | 18    | ..    |
|                            | Freeman .....        | 4     | ..    | York—Toronto .....          |                     | 22    | ..    |
|                            | Monck .....          | 4     | ..    |                             | Newmarket .....     | 1     | ..    |
|                            | Draper .....         | 1     | ..    |                             | Gwillimbury E. .... | 36    | ..    |
| Nipissing—Widdifield ..... |                      | 2     | ..    |                             | Gwillimbury N. .... | 13    | ..    |
| Norfolk—Simcoe .....       |                      | 2     | ..    |                             |                     |       |       |
|                            | Charlotteville ..... | 5     | ..    |                             |                     |       |       |
|                            | Windham .....        | 1     | ..    |                             |                     |       |       |
|                            |                      |       |       |                             |                     | 526   | 3     |

## Editorial

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### Publicity in Public Health

NEW BRUNSWICK Health Week, just completed, proved to be not only a tangible evidence of the organizing ability of New Brunswick's energetic Minister of Health, but also an excellent demonstration of how to deliver public health education to the public on a large scale. Meetings addressed by leaders in various phases of public health were held in all parts of the provinces during the week commencing with large Sunday afternoon meetings at Fredericton, St. John and Moncton. The audiences throughout the province were large and listened to the various speeches with an attention which left nothing to be desired. Newspaper support, editorial and otherwise, was magnificent. A somewhat interesting feature of the contribution supplied by the newspapers was the scattering through the news columns of terse public health axioms in heavy type. Another interesting type of co-operation was undertaken in the schools of the province, in which a certain part of each day was set aside for the discussion of a particular aspect of health. Brief essays written upon the blackboard were copied by the pupils and taken home. The co-operation of the churches of the province and of the Women's Institutes was also very evident.

Altogether at the end of the week we could not but feel that public health is at last beginning to come into its own. It is true that in the past the knowing among us have insisted that public health should be the first consideration of a statesman, but, unfortunately, such statements have been largely academic in character. Actually the subject is quite as important even as a victory loan or a political campaign. Why, then, not elevate it to the position of prestige which it deserves.



## Notes on Current Literature

From the Department of Information on Public Health, Canadian  
Red Cross Society.

### BOOK NOTICES.

#### *Short Talks on Personal and Community Health.*

By Louis Lehrfeld, M.D. Philadelphia: F. A. Davis & Co., 1920.  
Cloth, pp. 271. \$2.00.

A collection of short articles on health topics issued by the Philadelphia Department of Public Health. These articles are well written in simple, popular language and include numerous useful hints of interest to the lay reader.

#### *Sanitary Entomology.*

(The details and review of this book have already been sent to you.) Price of this not noted by publisher.

### INTERESTING ARTICLES IN RECENT PERIODICALS.

#### *International Public Health Problems.*

"North American Review," March, 1921. p. 319.

Col. Richard P. Strong describes in masterly fashion the growth of international health bodies from the Paris Conference of 1851 to the League of Red Cross Societies and the International Health Organization.

#### *The Red Cross Society and Public Health.*

"Bulletin of the League of Red Cross Societies," March-April, 1921. P. 193.

#### *Organizing the Junior Red Cross.*

"The League of Red Cross Societies"—Leaflet.

#### *The Red Cross and Labour.*

"Bulletin of the League of Red Cross Societies," March-April, 1921. P. 234.

#### *Municipal Administration of Health Departments.*

"American Journal of Public Health," May, 1921. P. 401.

#### *The Red Cross in the United States.*

"Health News," March, 1921. P. 55.

A symposium on the activities of the American Red Cross, including voluntary agencies in official health work; the health programme of the American Red Cross and the Red Cross in volunteer health work.

*Health Work Among Children of Pre-School Age.*

"Modern Medicine," April, 1921. P. 244.

*Malnutrition in Children.*

"Public Health Reports, U.S.P.H.S.," April 29th, 1921. P. 923.

Adapted from an article prepared by Dr. L. Emmett Holt for the United States Public Health Service. This thorough exposition of the subject will be of interest to every child welfare worker.

*Infant Mortality in New Zealand.*

"The Survey," April 30th, 1921. P. 148.

The infant mortality rate is a scientific index of social welfare. The reasons why New Zealand has the lowest rate in the world are instructive and, in many respects, applicable to conditions in Canada.

*Interesting Children in Habits of Health.*

"The Public Health Nurse," May, 1921. P. 239.

*Factors That Influence Infant Mortality.*

"The American Journal of Public Health," May, 1921. P. 415.

*The Public Health Nurse and Social Hygiene.*

"Pacific Coast Journal of Nursing," April, 1921. P. 210.

*Sex Education.*

"The Public Health Nurse," May, 1921. P. 247.

An outline for a course in sex education to be given in conjunction with practical hygiene and home care of the sick.

*Suggestions for the Country Nurse.*

"The Public Health Nurse," April, 1921. P. 172.

Some very practical suggestions for public health nurses in rural communities.

*Food in Its Relation to Health.*

"American Journal of Clinical Medicine," April, 1921. P. 269, and May 21. P. 341.

*Tobacco and Efficiency.*

"Journal of Industrial Hygiene," May, 1921. P. 1.

*Industrial Hygiene.*

Canadian Research Council.

A survey made by the Committee on Industrial Fatigue of the Canadian Research Council, dealing with the general conditions of industrial hygiene in Toronto, with special attention to the problem of lost time due to sickness.

*Housing by Employers.*

United States Bureau of Labour Statistics, No. 263.

This report describes housing work done by employers in the interests of their employees. A description and analysis are made



of the factors in the housing problem over which an employer who essays to provide housing accommodation has more or less control. These factors include such topics as plans of construction, size and number of rooms and the character of the exterior and interior finishes. Altogether this is a most complete and elucidating report.

*Canadian Red Cross Publications:*

Membership Enrollment Handbook.

The Red Cross in War and Peace.

The Public Health Nurse.

The Community Health Centre.

Alberta Division, Report for 1920.

Saskatchewan Division, Report for 1920.

Saskatchewan Division, Past, Present and Future.

The Junior Red Cross in Saskatchewan.

Peace Time Work in Ontario.

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## Book Review

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*Sanitary Entomology.* The Entomology of Disease, Hygiene and Sanitation. Edited by William Dwight Pierce, Ph.D., Boston, Richard G. Badger, The Gorham Press, 1921.

So rapid has been the progress of our knowledge of medical and sanitary entomology during recent years, particularly since the outbreak of the war, in which the louse problem became one of first magnitude, that a work embodying the main results of recent developments of this subject has become a great desideratum.

Dr. Pierce's book fills this need admirably. It differs considerably in both aim and treatment from previously published works on medical entomology and parasitology. It is not an elementary text-book, and contains almost nothing on the morphological side of the subject, but it is a valuable source of information for practical investigators, research students and teachers. It is based on a course of lectures prepared mainly by Dr. Pierce for the use of a class of American entomologists, which was organized in May, 1918, "for the purpose of equipping themselves for any special service which they might be called upon to render during the war."

The work is thoroughly practical, all phases of the subject matter that have an important bearing on the relation of insects to diseases of man and the domestic animals, as well as the problems concerned directly with the control of disease-carrying insects, being prepared with great care and thoroughness on a basis of extensive first-hand knowledge on the part of the authors. The full bibliographies which appear at the end of each chapter are also a very valuable part of the work.

Among the features of general interest may be mentioned the introductory chapters by Dr. Pierce, dealing with the general aspects of the subject. In Chapter 1 are discussed the methods by which insects can carry or cause disease. Chapter 2, entitled, "Some Necessary Steps in Any Attempt to Prove Insect Transmission or Causation of Disease" is an excellent outline of the methods to be followed in investigation along these lines. Chapter 3 gives "A General Survey of the Needs of Entomological Sanitation in America," containing descriptions of a typical unsanitary farm, and an unsanitary town, and discussing the general methods



of improving sanitation from the entomological standpoint, in rural and urban districts. Chapter 4 is "A General Survey of the Seriousness of Insectborne Diseases in America."

The remaining chapters deal with particular groups of disease-carrying insects and the more special problems connected therewith.

The book is illustrated by 88 text figures and 28 halftone plates.

E. M. WALKER.

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## Man-Made Diseases

Many of the diseases that afflict man may almost be said to be made by him, says the U. S. Public Health Service, for they are spread almost altogether by his disregard of the simplest rules of sanitary living.

Typhoid fever, for instance, is spread by the contamination of water, milk, and food, by human filth which has been run into rivers or wells or left exposed for flies to carry to the kitchen or dining room, or which even more disgustingly, is carried to food directly from soiled hands.

Hookworm disease and other intestinal diseases are spread, to some extent at least, by the States which allow road-building gangs to work under conditions which too often compel them to scatter pollution to be carried by flies to their own kitchens or to be ground into the soil to be picked up by the bare feet of children. Practically all hookworm disease is due to soil pollution.

Malaria, too, is often spread by the ignorance and carelessness with which mosquito-breeding places are created or disregarded. Borrow-pits, dug to obtain stone for road work and other needs and left to fill with water, furnish homes for thousands of wigglers, culverts improperly placed produce pools that are equally prolific; ditches that are clogged and never cleared out are popular and populous; railroad and other embankments that stop or check the flow of water create conditions that are ideal—from the mosquito point of view.

Dr. T. F. Abercrombie, health officer of Georgia, has suggested that the convict and other gangs who work along the roads be required to fill up borrow-pits, place culverts properly, clean ditches, and attend to other small but important details that any man can do and that will deprive the mosquito of many of her breeding places.

To accomplish this along the roads is more important than it may seem, for a mosquito hatched at the roadside does not have to wander in search of food; all she has to do is to wait for food to come to her. Moreover, she is of the anopheline species, which spreads malaria, she has excellent chances both to acquire the malaria germs and to pass them along. Until she bites someone who has the disease, her bite, though no more pleasant than that of any other mosquito, is not any more dangerous. But a single malaria patient, driving along a ditch-bordered, mosquito-infested road, may provide hundreds of the insects with germs which they may pass on to every traveller along that road.

Dr. Abercrombie, by making the roads of Georgia safe for man, may materially reduce the malaria hazard of the State, and, according to the Public Health Service, his example deserves to be followed.—*Health News, United States Public Health Service.*

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# The Public Health Journal

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## Medical Organization in Great Britain

CONSULTATIVE COUNCIL ON MEDICAL AND ALLIED SERVICES. INTERIM REPORT ON THE FUTURE PROVISION OF MEDICAL AND ALLIED SERVICES.

SUMMARY BY DR. J. HOWARD HOLBROOK.

**M**EASURES for dealing with health and disease become, with increasing knowledge, more complex, and, therefore, less within the power of the individual to provide, but rather require combined efforts. Such combined efforts to yield the best results must be located in the same institution. As complexity and cost of treatment increase, the number of people who can afford to pay for a full range of services diminishes. Moreover, enlightened public opinion is appreciating the fact that the home does not always offer the best hygienic conditions.

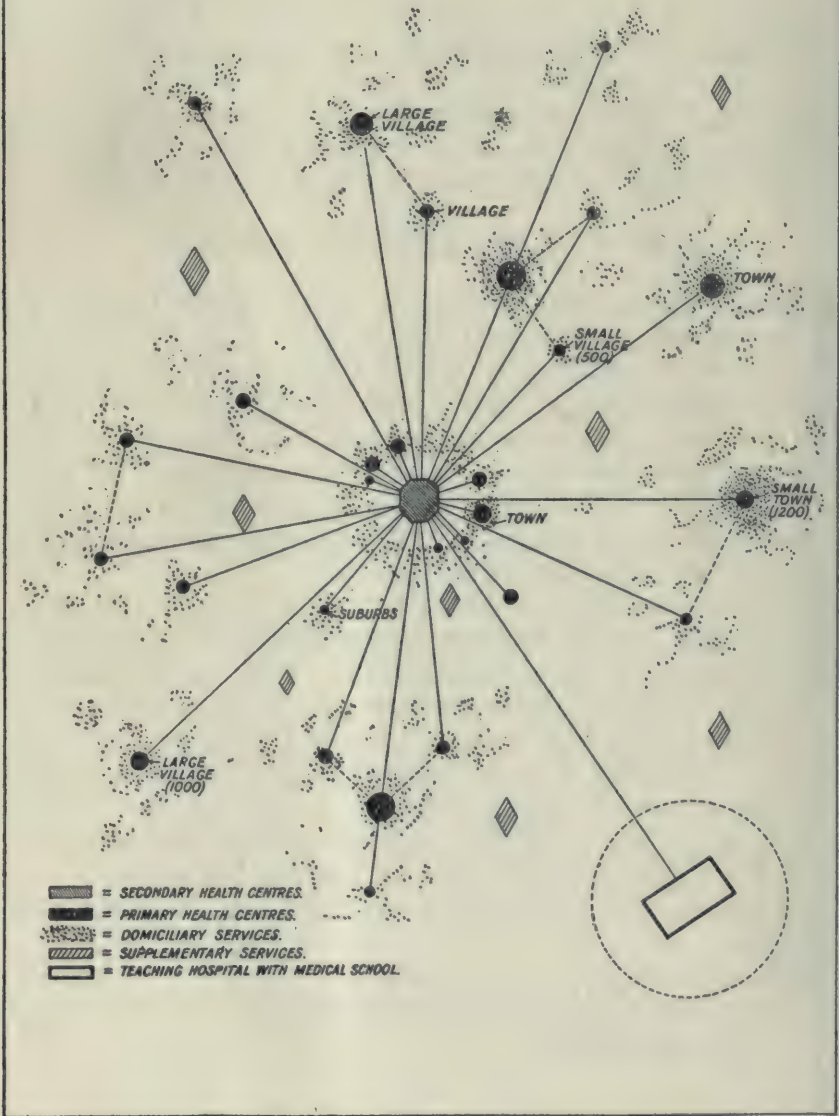
Preventive and curative medicine cannot be separated on any sound principle, and in any scheme of medical services must be brought together in close co-ordination. They must likewise be both brought within the sphere of the general practitioner, whose duties should embrace the work of communal as well as individual medicine. It appears that the present trend of the public health service towards the inclusion of certain special branches of curative work is tending to deprive both the medical student and the practitioner of the experience they need in these directions.

Any scheme of services must be available for all classes of the community.

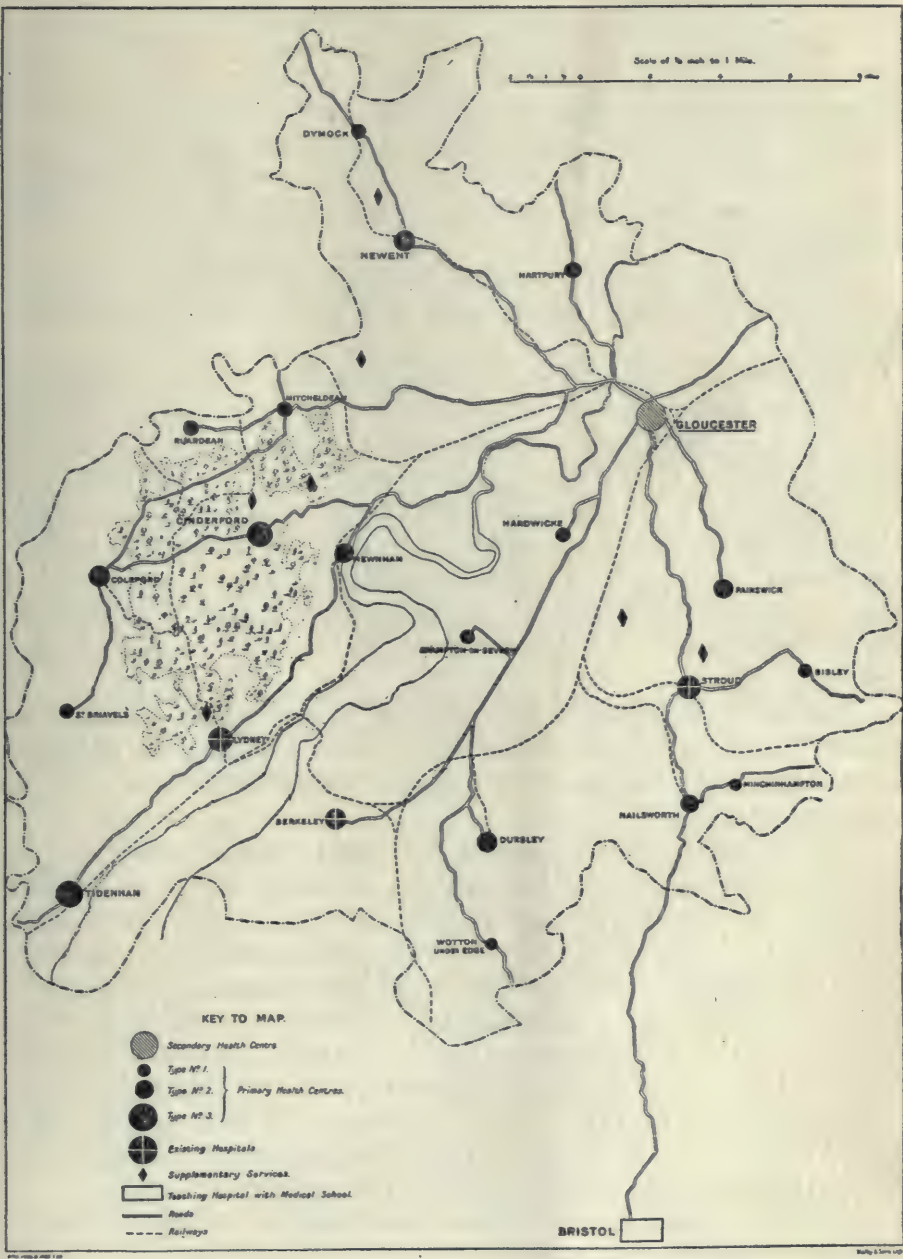
The services may be classified into—

Those which are Domiciliary as distinct from those which are Institutional.

**DIAGRAM OF AN AREA**  
**SHOWING ALL SERVICES.**







Those which are Individual as distinct from those which are Communal.

We begin with the home, and the services, preventive and curative, which revolve round it, viz., those of the doctor, dentist, pharmacist, nurse, midwife, and health visitor. These we style domiciliary services, and they constitute the periphery of the scheme, the remainder of which is mainly institutional in character.

A Health Centre is an institution wherein are brought together various medical services, preventive and curative, so as to form one organization.

Health Centres may be either Primary or Secondary, the former denoting a more simple, and the latter a more specialized service.

The domiciliary services of a given district would be based on a Primary Health Centre—an institution equipped for services of curative and preventive medicine to be conducted by the general practitioners of that district, in conjunction with an efficient nursing service and with the aid of visiting consultants and specialists. Primary Health Centres would vary in size and complexity according to local needs, and as to their situation in town or country, but they would for the most part be staffed by the general practitioners of their district, the patients retaining the services of their own doctors.

Secondary Health Centres must of necessity be situated in towns, where alone an efficient consultant service and adequate equipment could be expected, and the necessary means of communication exist.

The selection of these towns will need careful consideration, and full information will be required as to the extent of existing provision of hospital and allied facilities, and of its distribution in relation to population and means of public conveyance. In rural areas the natural currents of traffic and business and existing medical facilities will usually indicate the town or towns in which a Secondary Health Centre may best be placed. In this connection we would like to point out the importance of carrying out a "Hospital Survey" at an early date. The results of this survey would afford data for recognizing the areas in which the existing provision is inadequate, and the degree of the inadequacy.

The Secondary Health Centres would vary in size and elaboration according to circumstances.

Secondary Health Centres should in turn be brought into relation with a Teaching Hospital having a Medical School. This is desir-



able, first in the interest of the individual patient, that in difficult cases he may have the advantages of the highest skill available, and secondly in the interest of the medical men attached to the Primary and Secondary Centres, that they may have the opportunity to follow the later stages of an illness in which they have been concerned at the beginning, to make themselves acquainted with the treatment adopted, and to appreciate the needs of a patient after his return to his home.

Certain supplementary services would be a necessary part of the scheme. They would be in relation to both Primary and Secondary Health Centres, would often serve a wide area, and would require special staffs. They would comprise provision for patients suffering from such conditions as tuberculosis, mental diseases, epilepsy, certain infectious diseases, and for those in need of orthopaedic treatment.

Underlying our recommendations is the dominant purpose of providing the best services for the health of the people. Our recommendations are designed to secure—

- (1) Provision of buildings and equipment.
- (2) Services suitably correlated and available for all.
- (3) Opportunity for the best work and the furtherance of knowledge.
- (4) Co-ordination of preventive and curative medicine.
- (5) Freedom of action for doctor and patient.

#### PRIMARY HEALTH CENTRES.

Accommodation.—There would be wards of varying sizes, and for varying purposes, including provision for midwifery. The increasing employment of open-air treatment of illness would be provided for. Clinics would be equipped where doctors could see their patients and consult with each other.

Further accommodation might include the following:

Operating room, with the necessary equipment.

Radiography rooms.

Laboratory for simple investigations.

Dispensary.

Baths, including simple hydro-therapy.

Equipment needed for Massage, Electricity, Physical Culture.

A Public Mortuary.

A Common Room which would serve as a meeting-place for the general practitioners of the district, and to store Clinical Records on an agreed and standardized basis.

**The Personnel.**—The general practitioner would attend at the Primary Centre such of his patients as required hospital treatment, irrespective of their status, though under varying conditions of service. Consultants and specialists from the staff of the Secondary Health Centre, to which the Primary Centre was attached, would attend under the conditions of the service at fixed intervals, and, under circumstances of emergency, on special summons. These or other consultants could attend patients other than those provided for at the Centre, if the patient paid for their services. The Primary Centre would provide the patient (on the terms described in paragraphs 72 and 73 below) with food, nursing, and all the equipment of efficient treatment, but not with medical attendance, which would be paid for either by the patient, or through some method of insurance, or by the health authority.

**Efficiency of Service.**—No small part of the advantage likely to follow from such institutional provision would be the raising of the standard of professional efficiency. Medical knowledge has far outstripped the means for its application. Within the hospital the student studies the problems of disease under favorable circumstances; he has near at hand, not only the equipment of the war, but the laboratories of radiography, pathology, and chemistry; he can marshal his observations, and follow up results. Under existing conditions he leaves hospital for practice, and there is a sudden drop to the limited opportunities attached to the crowded surgery and the patient's home, and the more medical knowledge advances the bigger the drop becomes. In the Health Centre there would be the equipment and the encouragement to do good work, and opportunities for observation and investigation and self-improvement. Disease, too, would be detected in its earlier, and, therefore, more curable stages. Judged alone by the effect on medical men and medical knowledge, it would be impossible to exaggerate the benefits that would accrue to the community by the establishment of these Health Centres.

**Whole-time and Part-time Services.**—The alternative of a whole-time salaried service for all doctors has received our careful consideration, and we are of opinion that by its adoption the public would be serious losers.

No doubt laboratory workers and medical administrators who do not come in personal contact with the sick man would, with advantage, be paid entirely by salary.

The clinical worker, however, requires knowledge not only of the disease, but of the patient; his work is more individual, and if



he is to win the confidence so vital to the treatment of illness, there must be a basis not only of sound knowledge but of personal harmony. The voluntary character of the association between doctor and patient stimulates in the former the desire to excel both in skill and helpfulness. It is a true instinct which demands "free choice of doctor," and there should be every effort, wherever possible, to make this choice a reality. In no calling is there such a gap between perfunctory routine and the best endeavour, and the latter, in our opinion, would not be obtained under a whole-time State salaried service which would tend, by its machinery, to discourage initiative, to diminish the sense of responsibility, and to encourage mediocrity.

#### SECONDARY HEALTH CENTRES.

The services of the Secondary Health Centres would be mainly of a consultative type. The Centres would receive cases referred to them by the Primary Centres, either on account of difficulties of diagnosis or because in their diagnosis or treatment a highly specialized equipment was needful. On the other hand, Primary Centres would ease the work of the Secondary Centres by treating less complex cases which are now sent to the larger hospitals, and by receiving patients from the Secondary Centres when the acute stage of their illness had passed. Although in some places, e.g., in smaller towns, it would be necessary to have primary services also performed in Secondary Health Centres, these should not be allowed to interfere with the consulting functions of the Secondary Centre.

Most of the Communal Services of the Secondary Health Centres would resemble in function the Communal Services of the Primary Centres, but should be models of equipment and organization, for they would have very important educational functions and would be centres of post-graduate study for doctors and training for nurses and others.

Method of Remuneration of Consultants.—These consultants would be part-time officers, and be paid on a time basis with extra fees for special visits. This would leave them time for their private consulting practice.

Consultants (Non-Clinical).—The pathologists, radiologists, and the officers connected with the Communal and Preventive services of the Secondary Health Centres would similarly visit in a consulting capacity the Primary Health Centres within the spheres

of their Secondary Centre. Certain of these would be whole-time officers.

The test of eligibility to serve as a consultant or specialist would be evidence of special training and experience of the requisite kind. This evidence would be afforded by consideration of such points as—

- (1) Special academic or post-graduate study.
- (2) Tenure of hospital and other appointments affording special opportunities for acquiring experience; and
- (3) Local professional recognition of competence in a consultative or expert capacity.

While all these points would afford indications to which due regard should be paid, no one of them would be considered to be in itself indispensable.

We contemplate that general practitioners should be eligible for these posts, and we should regard their representation in the consultant service and on the staffs of the Secondary Health Centres as an advantage.

Payment for Treatment at Health Centres.—Certain members of the Council are of the opinion that curative services at Health Centres should be provided by the health authority free of charge to the individual patient. The majority of the members, however, consider that this course would impose a heavy burden on public funds. Preventive services must of necessity be publicly provided; their relation to the individual is less obvious and personal. On the other hand, illness is a direct personal concern, and experience has shown that the patient, when able, is willing to contribute in some form or other to the cost of its treatment. It could, as a rule, only be a contribution to the cost, for it has already been pointed out that efficient treatment will often be beyond the means of most citizens to provide in its entirety.

We recommend that standard charges should be made in the public wards and for other curative services, though it is possible this standard charge might vary in different parts of the country.

We contemplate that such charges would more often be met by some method of insurance, though private patients recommended by their doctors would have the right to avail themselves of these services by direct payment.

#### SUPPLEMENTARY SERVICES.

With both Primary and Secondary Health Centres there would be correlated certain institutional services from time to time neces-



sary to each. Such services, termed "supplementary," may be exemplified by the following:

Sanatoria for tuberculosis.

Recuperative centres (convalescent centres).

Hospitals for curable or incurable mental disease.

Institutions for the feeble-minded.

Epileptic colonies.

Orthopaedic centres.

Hospitals for certain infectious diseases.

In those parts of the country where it is geographically possible, it is desirable that every Secondary Health Centre should be brought into relationship with a Teaching Hospital.

The Teaching Hospital would receive cases of unusual difficulty, and those requiring specialized knowledge or equipment, and in so far as is necessary, patients suitable for either primary or secondary hospitals should be freely admitted to Teaching Hospitals.

The Teaching Hospital could initiate and guide collective investigations in which the health centres and doctors connected with them could play an important part.

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# The Schick Reaction in the Control of Diphtheria

BEVERLEY HANNAH, M.B. (Tor.); M.R.C.S. Eng.; L.R.C.P. London.  
Hospital for Sick Children, Toronto

THE history of Diphtheria prevailed through many centuries, but it was not until about 1855 that the medical profession began to recognize it as a definite disease, and place Diphtheria in the category of Communicable Diseases. Twenty-eight years later, in 1883, Klebs brought forward his work on the bacteriology of Diphtheria. In 1885 he and Loeffler combined their work, giving to medical science a definite organism, the Klebs-Loeffler Bacillus with its bacteriology and morphology, as the cause of diphtheria. Another period elapsed until 1894, when Von Behring introduced antitoxin for the treatment of this disease. Each year has seen the Health Departments putting forth strenuous efforts for the control of diphtheria and other communicable diseases. There has resulted a steady decrease in the prevalence and mortality of this disease. However, with all our modern preventative and curative methods, these two factors are decidedly too great.

Another advance in preventive medicine came in 1913, when Schick introduced his work on the immunity test in diphtheria. He used as a basis for his work the following fact: A person is immune to the diphtheria toxins when, immediately after these enter the body-tissues, they become neutralized and therefore without any effect. The diphtheria toxin was standardized as to its effect upon a 250 gram guinea-pig, and the M.L.D. (minimal lethal dose) determined. It was then found that 1/50 of the M.L.D. was sufficient for carrying out this immunity test in man.

A fresh solution of the diphtheria toxin is prepared and put up in sealed capillary tubes by the various laboratories. The strength of each tube is standardized so that when mixed with 20 c.c. of physiological salt solution 0.2 c.c. represents 1/50 M.L.D. of toxin for a 250 gram guinea-pig. The contents of each tube will retain its quality for a considerable period of time, but the mixed solution is good only for 24 hours.

The technique employed in performing this test is as follows: A 1 c.c. Record syringe finely graduated, with a number 26 gauge  $\frac{3}{4}$ " short bevel point needle are requisite for injecting these solutions.

The test is entirely intracutaneous. The mixed toxin is injected on



the flexor surface of the forearm. When properly performed, there occurs at the point of insertion a whitish blister like elevation with slight depressions on its surface, corresponding with the hair follicles. The reading of the test should be carried out at the end of 24, 48, 72 and 96 hours.

The reaction that appears at the site of injection may be either positive, negative, pseudo or combined positive and pseudo.

The positive reaction represents the action of an irritant toxin upon tissue cells that are not protected by antitoxin. It indicates, therefore, an absence of immunity to diphtheria. A trace of redness appears slowly at the sight of injection in from 12 to 24 hours, and usually a distinct reaction in the course of 24 to 48 hours. The reaction reaches its height on the 3rd or 4th day and gradually disappears, leaving a definitely circumscribed scaling area of brownish pigmentation, which persists for 6 weeks. At its height the positive reaction consists of a circumscribed area of redness and slight infiltration, which measures from 1 to 2 cm. in diameter. The degree of redness and infiltration varies to a great extent with the relative susceptibility of the individual.

In the negative reaction the skin at the site of the injection remains normal. The negative reaction definitely indicates an immunity to diphtheria if the test toxin is of full strength, has been freshly diluted, and the injection has been made into the proper layer of the skin.

The pseudo reaction represents a local anaphylactic response of the cells to the protein of the autolysed diphtheria bacilli, which is present in the toxin broth used for the test. Like other anaphylactic skin phenomena, the reaction is of an urticarial nature, appears early, within 6 to 18 hours, reaches its height in 36 to 48 hours and disappears on the 3rd or 4th day, leaving a poorly defined small area of brownish pigmentation and generally scaling. At its height the pseudo-reaction shows varying degrees of infiltration, and appears as a small centre area of dusky redness with a secondary areola, which gradually shades off into the surrounding skin. The reaction may also have a rather uniform red appearance and be 2 or 3 times the size of a true reaction. Such pseudo-reactions have been comparatively infrequent with our work in children.

A control test as advocated by Groer and Kassowitz may also be used. This control injection contains the same amount of toxin as the Schick test, together with several hundred times the necessary antitoxin to neutralize the poison. Thus far in our work we have not found occasion to utilize this control test because there has not been any difficulty in reading any of the reactions.

The work of this paper on the Schick test has been conducted in the wards of the Hospital for Sick Children. It has extended over a period

of 18 months. During that time over 2,000 children have had this test performed upon them. Our statistics correspond very closely to those of Schick, Park, Zinger and various other workers along this line. It includes children of all ages up to 15 years. To these have been added the results in people after that period of life as found by other observers.

|                         | Percentage Positive |             |
|-------------------------|---------------------|-------------|
| Under 3 months.....     | 11.5                | 15 (Schick) |
| 3 to 6 months.....      | 27.5                | 30 "        |
| 6 months to 1 year..... | 53.0                | 60 "        |
| 1 to 2 years.....       | 61.0                | 70 "        |
| 2 to 3 years.....       | 64.4                | 60 "        |
| 3 to 5 years.....       | 41.3                | 40 "        |
| 5 to 10 years.....      | 30.0                | 30 "        |
| 10 to 15 years.....     | 23.5                | "           |
| 10 to 20 years.....     | .....               | 20 "        |
| Over 20 years.....      | .....               | 15 "        |

It is interesting to note from the above figures the increase in susceptibility of children up to 3 years of age. Following these years, there comes a gradual increase in immunity up to 15 years of age, when it is found that about 10% to 15% of adults are susceptible to diphtheria. Reviewing these statistics on the prevalence and mortality of diphtheria, we are struck by the fact that the percentage-rate is greatest between the ages of 1 and 5 years. This intimate relationship between the age of greatest susceptibility and highest percentage-rate of prevalence and mortality in diphtheria, is sufficient to justify the value of Schick's work on the immunity test in Diphtheria.

The intensity of reactions is greatly influenced by the preparation of the toxin used. It is highly essential that the toxin be properly standardized and distributed by a reliable laboratory. Changes in the immunity of individuals vary with their general health, as in other diseases. This important fact will require consideration in our future work with the Schick test. Park states that this is particularly noticeable in scarlet fever patients, who show a decided susceptibility to the Klebs-Loeffler bacillus and its toxin. The season of the year has been found to offer very slight influence upon the test.

The Schick test is practically free from any complications or ill effects. The question of local necrosis after the reaction occurred in six of our series. It was noted in the form of a bleb 3 to 4 cm. in diameter. These all healed readily without any local treatment. Both Schick and Lucas state that they have occasionally encountered a similar condition, and that all cultures from contents of these blebs were sterile. This reaction was probably caused when stronger solution of toxin or too large quantities were used.



The Schick reaction must necessarily be a simple procedure and of practical application if we can hope to utilize it to advantage in the control of diphtheria. The various laboratories have done much to simplify the technique. They have provided standardized solutions with printed instructions which are readily obtainable. Its greatest value is to be found in the schools, hospitals, and various children's institutions of which there are many. It has been interesting to note the gradual decline of diphtheria cases in the wards of the Hospital for Sick Children since the introduction of the Schick test. It enables us to separate our susceptible and immune individuals, and provide the former with the required immunity. This is applicable not only to patients but all inmates of these institutions. Diphtheria prevails during the school period. Accordingly, the schools should be one of the chief places to introduce the Schick reaction in the control of this disease.

It is highly probable that this test will become part of the routine of public health work. We have at our disposal a simple and practical procedure which should lend itself readily in assisting to prevent the spread of this dread disease which has been so prevalent in the past. Although our work is only in its early stages, we are able to recognize certain facts;

1. The Schick test is a simple and reliable reaction; a negative result indicating a definite immunity to diphtheria and a positive one, that the individual is susceptible to the Klebs-Loeffler bacillus and its toxins.

2. The solution of toxin used must be standardized by a reliable laboratory.

3. Its chief value is applicable to institutions, schools, hospitals and various children's organizations.

4. The test is free from danger.

5. It is of economic value, in preventing the promiscuous administration of antitoxin, both public and private.

6. The Schick reaction offers us a ready means to aiding in the future control of Diphtheria.

Paper read before Section of State Medicine, Academy of Medicine, Toronto, February 24th, 1921.

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# Report of Committee on Rural Communities, Nursing and Social

BY F. C. MIDDLETON, M.B.

Presented at National Health Congress, Toronto  
May 17th, 1921

*Committee:* MISS GUNN, Lady Superintendent, Toronto General Hospital; MRS. HANNINGTON, Victorian Order of Nurses; MISS MARY POWER, Provincial Board of Health, Toronto; DR. HATTIE, Medical Officer of Health of Nova Scotia; DR. W. J. BELL, Provincial Board of Health of Toronto; DR. F. C. MIDDLETON, Bureau of Public Health, Regina (*Chairman*).

AT the Convention held in Vancouver last year, I had the honour to be chosen Chairman of the Committee on Rural Communities, Nursing and Social, and was given the privilege of naming the other members of this committee, with the result that I was fortunate in securing the following to act: Miss Gunn, Lady Superintendent of Toronto General Hospital. Mrs. Hannington, of the Victorian Order of Nurses; Miss Power, of the Provincial Board of Health of Ontario; Dr. Hattie, Medical Officer of Health of Nova Scotia, and Dr. W. J. Bell of the Provincial Board of Health of Ontario.

At the Vancouver meeting we had arranged for a paper on "The Peace Time Policy of the Red Cross", to be given by Professor Fitzgerald, but it was considered that this paper was one of such general interest that it was decided to have it read at an evening session which was thrown open to the general public. The proposals decided upon at the Geneva Conference were clearly outlined by Professor Fitzgerald, showing that the policy of the Red Cross was to act in an auxilliary capacity to the existing Health organizations, and that the Health organizations should continue to be, as formerly, the clearing houses for all matters pertaining to Public Health.

Fitting in very nicely with the above paper, was a paper prepared by Dr. Hattie, on the co-ordination of the different voluntary organizations doing public health work, in which a desire was expressed that all voluntary organizations doing public health work should be guided in such a way that their work would be undertaken where most required and that overlapping should be guarded against.

In gathering together a brief report from the various provinces as to their activities for the past year along the lines of rural nursing, it



would appear that each province handles this phase of its public health work in a manner peculiar to itself and absence of uniformity is the prevailing feature.

The prairie provinces apparently look upon the rural nursing problems with more favour than the others, for the reason no doubt that their population is largely rural.

In reviewing the work being undertaken by the several provinces, it is indeed encouraging to find that a great deal of attention is being given to the rural communities in endeavouring to supply these outlying districts with better nursing facilities.

In British Columbia during the past year, twelve nurses have been established, the Red Cross having co-operated with the Provincial Board of Health by giving the necessary financial assistance.

The municipality of Saanish adjoining Victoria, is spending \$25,000 for the erection and equipping of a building to be used as a Health Centre for this municipality, where their nurses will make their headquarters.

The Provincial scheme is to guarantee the salary of a nurse in a district for six months of a year, when it is hoped the work will become self-supporting.

Boards of School trustees may now employ nurses and dentists on the same basis as they employ teachers, the Government paying the rural schools \$580 a year towards salary.

A Faculty of Nursing has been established in the University of British Columbia, which includes a public health nursing course and 22 nurses completed this course in March. The Victorian Order of Nurses have been utilized for the practical training in connection with the University Course.

The Women's Institute and other such organizations are used as a nucleus in promoting child welfare work.

In Alberta this year, a special course was put on by the University of Alberta at the request of the Government, and fourteen nurses received training in Public Health Work. Public Health Nurses, Child Welfare Nurses, District Nurses, Tuberculosis Nurses and Nurses in Venereal Disease Clinics, to the number of twenty, are employed by the Provincial Board and it is expected that each branch of this work will be largely extended this year.

A system of municipal Hospitals in Alberta is relieving the rural districts to a satisfactory degree.

In the Province of Saskatchewan we have endeavoured to supply our rural districts with the combined service of hospital accommodation and nursing care, by the establishing of Union Municipal Hospitals, and we have been successful to the extent that we now have one hospital bed for every 400 of our population, and our people are being educated

to use these hospitals for their maternity work, so that at present one child out of every eight born in Saskatchewan is born in a hospital. We have found that where the facilities for caring for the sick are provided within easy reach of the people it requires very little education to get them to take advantage of these facilities, whereas, the education is of greatly discounted value, unless provision is made whereby the education may be put into practical use. These two conditions cannot be separated.

Nine rural municipalities have each engaged a municipal nurse and five others have engaged a municipal doctor. Under the Supervision of the Commissioner of Public Health, two nurses are engaged in visiting the villages, giving short courses in home nursing for the benefit of the women in the community, and these courses have also been given to the Soldier Settlers' Wives, during their conventions in the different parts of the province. Where requested Baby Clinics are also conducted at the conclusion of these courses and a system of follow up work is carried out where the examination indicates the need for this. During the summer these conferences are conducted in connection with the fairs. Public Health literature and the booklet, "The Baby" are distributed at these courses.

A nursing housekeeper course has been established to provide an assistant nursing body who will assist in the rural homes in case of illness.

A specially qualified nurse visits homes where tuberculosis exists to see that those in charge carry out the instructions of the attending physician with a view to preventing the spread of the disease.

A male and female social service nurse are engaged in connection with the carrying out of the provisions of our venereal disease act. A nurse specially trained in Trachoma work is engaged in seeing that regular treatment is given those requiring same. This nurse lives in a rural district where this disease is fairly prevalent.

A maternity grant of \$25.00 is given to prospective mothers in rural district who for financial or other reasons might not be able to secure the services of a nurse or doctor at time of her confinement.

Under the Department of Education a staff of 12 nurses, doing school hygiene work last year visited 1,121 schools mostly rural, and inspected 33,831 pupils.

The Red Cross has assisted the outlying districts in the following manner: by giving financial aid to equip some of the needy municipal hospitals: by assisting financially some of the poorer municipalities, where a municipal nurse is engaged. They have built and equipped a Red Cross outpost in the far north and have a nurse established there.



They are undertaking to equip a travelling dental clinic for the more remote districts this summer.

Manitoba has probably the largest public health nursing service of any of our provinces and all under the supervision of the Provincial Board of Health. At the end of 1920 there were 43 nurses on this staff, who performed the duties of school nurse and community nurse. Some 28,000 inspections and 2,165 class room inspections were made, 3,612 school room talks were given, 17,813 home visits (a very important feature) were made; 581 demonstrations were given and 387 Little Mother League classes for older girls were held. 244 Public lectures on health topics were also given.

Special attention is being given to the Little Mothers' Leagues. Seven Child Welfare stations have been opened and 125 child welfare clinics held. Follow up visits are paid where necessary to the babies examined at the clinics.

The Red Cross have furnished three nurses to be stationed in un-organized territory, which nurses are controlled and supervised by the Provincial Board of Health. They undertake to do actual nursing and when not so engaged carry on educational work. Their territory extends for a radius of from 15 to 20 miles from where the nurse is stationed.

#### *Ontario.*

Following the appropriation of \$40,000 by the Provincial Legislature in 1920 the Provincial Board of Health was enabled to establish a Division of Maternal and Child Welfare. In June of last year, eight nurses were appointed, who, with the exception of one, had had previous Public Health experience. One month later the Ontario Division of the Red Cross supplied eight additional nurses, to be under the supervision of the Provincial Board of Health.

An intensive course in Child Hygiene was given for a period of three months, following which two of the nurses were assigned to each of the eight Health Districts of the Province.

The aim of the Department is to give a complete demonstration of generalized Public Health Nursing in a community desiring the same, and then to urge that municipality to appoint and support their own nurse.

The following is a summary of the work accomplished and of that at present under way:

23 Demonstrations and 32 surveys of existing conditions in various districts have been completed.

8 permanent nurses have been appointed as a direct result of the Public Health Demonstrations, while 7 additional applications for public health nurses have been received.

Further demonstrations are being carried on in 8 communities at the present time.

*Quebec* is preparing a campaign against infant mortality and tuberculosis more particularly, and funds for this work are being obtained largely by the Provincial Government taxing all amusements.

*New Brunswick* is just getting started with its scheme of rural nursing and already a training school for public health nurses has been established with the understanding that as these nurses graduate they will go to districts decided upon by the Department of Public Health.

Victorian Order Nurses have been placed in a number of semi-rural districts.

Financial assistance is expected from the Red Cross for the first year the Public Health nurses are sent out and after that the municipalities will be required to supply the funds for this work.

In *Nova Scotia*, during the summer of 1920, the Red Cross equipped three health caravans carrying expert medical, dental and nursing service to the most isolated districts of the province.

The Department of Public Health is endeavouring to establish at least one health clinic in each county, and the Red Cross have contributed \$25,000 to maintain a trained public health nurse in each county for a year. Already nine counties have furnished clinic rooms and nine nurses are on duty. Three more will be added this month. These nurses have made partial examination of over 15,000 pupils since October 1st.

The county public health nurse and a local physician are in attendance at each clinic every Friday.

In summarizing what is being undertaken by the several provinces, along the lines of supplying nursing facilities to the rural districts, the outstanding feature appears to be the attention that is being given to the inspection of school children by the nurses, and this brings us at once to a question suggested by one of the members of the Committee, viz., to what extent should nurses carry on this examination?

The report would also naturally lead us to ask what is being done for the child of pre school age. This is an age which is apparently being neglected. Finally, is sufficient attention being given to the prenatal period in our nursing schemes?

Had space on the programme permitted, two of our committee had suggested a paper on school nursing, taking up the advantages of control by Department of Education and Department of Health, but unless discussion on this is fully entered into, your new committee might well keep this in view for a later meeting.



# Is There a Shortage of Student Nurses?

*A Survey made by the Canadian Red Cross Society*

THE survey upon which this study is based was made by the Canadian Red Cross Society in February, 1921, at the request of the Canadian National Association of Trained Nurses and the Canadian Association of Nursing Education to determine the extent, degree, causes and possible remedies for the apparent shortage of pupil nurses in the training schools of Canada. A questionnaire was prepared with the assistance of Miss Gunn and Miss Flaws and sent with an explanatory letter to the Superintendents of 219 Training Schools throughout Canada.

More than half of the questionnaires were answered<sup>1</sup> representing, with the exception of British Columbia and Quebec, a majority of hospitals in each Province<sup>2</sup>. The replies received were classified evenly among small, medium and large-sized hospitals. For these reasons the facts elicited may be considered to represent with fairness and reasonable accuracy the situation at that time.

A shortage of student nurses was reported by 39 out of 98 training schools. Though a shortage of 40% cannot be considered extreme yet many of the answers indicate that a shortage did exist until the completion of military demobilization and altered economic conditions decreased the demand for young women in occupations undertaken by them during the war. This answer may be considered a fair representation of conditions in January, 1921, for as was pointed out in the introductory remarks, these schools are distributed evenly as to province and size of hospital and the figures include nearly one-half of the schools in Canada.

To what causes was this shortage attributed? The cause most frequently assigned was "the attractiveness of other occupations." This single cause was paramount and scored more points than did almost all other causes added together.<sup>3</sup> The superintendents of the schools affected had tried to remedy the shortage by advertising and publicity, by better quarters and by increasing the cash allowances.<sup>4</sup> The result in most cases had not been encouraging.

The intensity of the shortage according to Provinces is shown by the following table:

|                       |                           |
|-----------------------|---------------------------|
| Manitoba.....         | 3 out of 5 replies (60%)  |
| British Columbia..... | 7 out of 13 replies (54%) |

Ontario.....21 out of 53 replies (40%)

Saskatchewan..... 3 out of 9 replies (33%)

Minor shortages were reported by the other provinces.<sup>5</sup>

In addition to the fundamental question of the existence of a shortage some interesting facts were revealed regarding the profession of nursing.

*Size of Hospital.*—The average number of beds in hospitals with training schools was 143. These hospitals divided into three groups of almost equal size:<sup>2</sup>

1. Small hospitals with not more than 50 beds.
2. Medium sized hospitals with from 51 to 100 beds.
3. Large hospitals with over 100 beds.

*Activity of hospitals.* The degree of activity of these hospitals may be judged by the fact that an average of 79% of the beds were reported as being in daily use.<sup>6</sup>

*Teaching Staff.*—The number of graduate nurses employed gave a rough indication of the staff available for nursing patients and instructing students. There was one graduate nurse for every 16 beds and for every 5 students.<sup>7</sup>

*Preparatory Occupation.*—Many girls on leaving school wish to study nursing but are necessarily prevented by reason of their extreme youth. To answer the oft-repeated inquiry of these young girls as to the best means of filling in time between High School and Training School, Superintendents were asked to suggest a remunerative occupation or a course of study that a girl might take up on leaving school until she was old enough to commence training, and which would assist her subsequent career as a nurse. The collective wisdom of the Superintendents indicated courses in Household Science or Dietetics as by far the most useful bridge between High School and Training School.<sup>8</sup>

*Length of Course.*—The three year course was almost the rule; ninety-three having this length of training as compared with four schools giving a course of two years.

*Supply of Students.*—This is estimated by comparing the applications and enrollments for 1915 with those for 1920. In interpreting these figures it should be remembered that 1915 was a war year, in which many young women sought admission or were actually enrolled in the hope of becoming Army Nursing Sisters.

In 1915 there were 7,740 applications made to 46 Hospital Training schools. In 1920 the same hospitals had only 4,760 applications. This tremendous numerical decrease is more apparent than real and was due to a flood of applications to the larger hospitals during the war year, for the hospitals showing an increase in applications are almost as numerous as those reporting a decrease.<sup>9</sup>

The number of students enrolled in 70 hospitals in 1915 was 1,707.



The same hospitals enrolled 2,365 students in 1920. Comparing the enrollments for 1915 with those for 1920, an increase was reported by 52 and a decrease by 12, six remaining unchanged.

Without a knowledge of the undoubted increase in bed capacity during this period of 5 years reasonable deductions from the foregoing figures cannot be made.

*Number of Student Nurses.*—The average number of student nurses in hospital training schools was 40.3 or one student nurse to every 3.5 beds. On this basis it is estimated that there are nearly 9,000 young women in the nurse training schools of Canada.

*Age Limits.*—The average minimum age limit for entrance to the schools is nineteen years. The most frequent is eighteen years, though three schools accept girls of seventeen, and one school will not take a girl who is younger than 23. By far the most frequent upper age limit is 35 years, though three schools will not accept applicants older than 25 and an equal number of schools have no definite senior age limit <sup>10</sup>

*Educational Qualifications.*—It was difficult to determine with accuracy the educational standard demanded of an applicant because some schools set up standards that are more honoured in the breach than in observance, and many add to their nominal standard that convenient but elastic phrase "or its equivalent." Three schools frankly admitted the absence of any definite standard whatever. "One year at High School or its equivalent" was stated to be the standard in 51 schools, while 19 schools demanded two years of High School training and a slightly greater number were satisfied with High School Entrance. After all, the laxity in this matter is of relatively small importance, when one considers the variety in examination standards of apparent equality, the lack of correspondence between education and ability, and the greater importance of the Superintendent's personal estimation of the potentialities of an applicant. On the other hand standards are, or should be, definite, and it is superfluous to point out to you that the steadily increasing complexity of the technicalities of modern scientific nursing make it impossible to instruct adequately a pupil of inferior general education. That this fact is generally appreciated by Superintendents is shown by a glance at the figures giving causes for which unsuccessful applicants were rejected.<sup>11</sup> By far the most frequent cause of rejection is lack of educational qualification, and the total for this cause almost equals the combined totals for all other causes. "Do you consider the educational standard too high?" was a question answered in the negative by over three-quarters of the Superintendents replying.

These facts show the good results of the firm stand taken by your Association in pressing steadily for a higher educational standard for student nurses.

*Cash Allowances.*—Nearly 93% of the schools give a cash allowance to student nurses in all years. This allowance varies from a minimum of \$2 a month in the first year to a maximum of \$30 a month in the third year, the average allowances being as follows:

|                  |        |
|------------------|--------|
| First year.....  | \$7.26 |
| Second year..... | 8.79   |
| Third year.....  | 10.32  |

*Uniforms and Texts.*—Free uniforms were supplied in one-half of the schools, while a few others gave the material from which the uniforms were to be made. Free text books were supplied in 22% of the schools.<sup>13</sup>

*Hours of Duty.*—The ten hour day is by far the most usual, occurring in 59 instances, as compared with fourteen of 9 hours and sixteen of 8 hours. An eleven hour day was admitted by five schools.

*Vacation.*—Vacations of a fortnight and three weeks divide the honours nearly evenly. A month's holiday is allowed in three schools.<sup>13</sup>

*Supply of Graduates.*—1,138 nurses were graduated by 72 schools in 1915, and the same schools in 1920 graduated 1,519. It is questionable if this increased annual output of nearly 400 graduate nurses is sufficient to offset the demand caused by the increased number and size of hospitals, in addition to the ever-widening range of nursing activities in the fields of industrial and public health nursing.

Excluding the unusual conditions occasioned by the pandemic of influenza, a shortage of graduate nurses for ordinary demands of the community was reported in almost 50% of cases.<sup>14</sup> The lack of graduates was chiefly for private nursing in homes, and was explained by the unsatisfactory conditions in the homes and the preference for public health and institutional work.

*Conclusion.*—This survey was made with your co-operation as a result of the request that the Canadian Red Cross Society should assist the National Nursing Associations in a campaign to recruit student nurses. While the results do not indicate a degree of shortage sufficient to justify action of a national character, yet in British Columbia, Manitoba and Ontario the needs of the situation are sufficient to justify Provincial action, and the Provincial Divisions of the Red Cross have been advised of the results of the survey in order that they may be in a position to co-operate with their respective Provincial Graduate Nurses' Associations.

#### REFERENCES

| <sup>1</sup> Province | Questionnaires<br>sent | Replies<br>Received |
|-----------------------|------------------------|---------------------|
| Alberta.....          | 21                     | 12                  |
| British Columbia..... | 38                     | 13                  |
| Manitoba.....         | 9                      | 5                   |



| <i>Province</i>    | <i>Questionnaires<br/>sent</i> | <i>Replies<br/>Received</i> |
|--------------------|--------------------------------|-----------------------------|
| New Brunswick..... | 9                              | 7                           |
| Nova Scotia.....   | 14                             | 9                           |
| Ontario.....       | 77                             | 53                          |
| P.E. Island.....   | 4                              | 3                           |
| Quebec.....        | 30                             | 14                          |
| Saskatchewan.....  | 17                             | 9                           |
|                    | <hr/> 219                      | <hr/> 125                   |

*\*Sizes of Hospitals:*

|   |    |
|---|----|
| Small Hospitals (50 beds or less).....    | 28 |
| Medium Hospitals (51 to 100 beds).....    | 29 |
| Large Hospitals (more than 100 beds)..... | 31 |

*\*Causes for the Shortage of Student Nurses:*

|   |              |
|---|--------------|
| Other occupations more attractive.....  | 21 instances |
| Lack of educational qualifications..... | 8 instances  |
| Difficulties of small hospitals.....    | 5 instances  |
| Poor quarters.....                      | 4 instances  |
| Hardships of training.....              | 2 instances  |
| Inadequate salary.....                  | 2 instances  |
| Emigration to U.S.A.....                | 2 instances  |

*\*Suggested Remedies for the Shortage:*

|                                  |               |
|----------------------------------|---------------|
| Shorter hours.....               | 10 cases      |
| Better quarters.....             | 9 cases       |
| Advertising.....                 | 7 cases       |
| Increased salary.....            | 6 cases       |
| Longer High School training..... | 3 cases       |
| Reduced age for entrance.....    | } 1 case each |
| Higher educational standard..... |               |
| Lower educational standard.....  |               |
| Scholarships.....                |               |
| Less "menial" work.....          |               |
| Longer vacation.....             |               |
| Shorter course.....              |               |

*Remedies Actually Tried:*

|                               |          |
|-------------------------------|----------|
| Advertising and speeches..... | 15 cases |
| Improved quarters.....        | 6 cases  |
| Increased salary.....         | 4 cases  |
| Shorter hours.....            | 2 cases  |
| More maidservants.....        | 2 cases  |

*\*Minor Shortages Reported:*

|                           |                                  |
|---------------------------|----------------------------------|
| Alberta.....              | Shortages in 2 out of 12 replies |
| Quebec.....               | " " 2 out of 14 replies          |
| Nova Scotia.....          | " " 1 out of 9 replies           |
| New Brunswick.....        | " " 0 out of 7 replies           |
| Prince Edward Island..... | " " 0 out of 3 replies           |

<sup>6</sup>*Activities of Hospitals:*

|  |        |
|--|--------|
| Replies received.....                      | 92     |
| Average number of beds occupied daily..... | 112.41 |
| Percentage of beds occupied daily.....     | 78.8   |

<sup>7</sup>*Graduate Nurses on the Staff:*

|  |       |
|--|-------|
| Replies received.....  | 95    |
| Total number of graduate nurses, including superintendent..... | 828   |
| Average number of graduates to each hospital.....              | 8.72  |
| Average number of beds to each graduate.....                   | 16.36 |
| Average number of student nurses to each graduate.....         | 4.67  |

<sup>8</sup>*Suggested Preparatory Training:*

|   |    |
|---|----|
| Course in Household Science or Dietetics..... | 43 |
| Office work.....                              | 17 |
| Business Course.....                          | 16 |
| School Teaching.....                          | 16 |
| House Work.....                               | 13 |
| Course in Elementary Science.....             | 12 |
| Combined University and Hospital Course.....  | 3  |

<sup>9</sup>*Applications for Enrollment:*

1915 compared with 1920.

|   |    |
|---|----|
| Schools showing increased number of applications..... | 22 |
| Schools showing decreased number of applications..... | 24 |
| Schools showing no change.....                        | 0  |

<sup>10</sup>*Age Limits for Entrance:*

|                                   |          |
|-----------------------------------|----------|
| Minimum of 17 years.....          | 3 cases  |
| “ “ 18 “ .....                    | 38 “     |
| “ “ 19 “ .....                    | 21 “     |
| “ “ 20 “ .....                    | 25 “     |
| “ “ 21 “ .....                    | 8 “      |
| “ “ 23 “ .....                    | 1 “      |
| Maximum of 25 years or under..... | 3 cases  |
| “ “ 26 to 30 years.....           | 29 cases |
| “ “ 31 to 34 “ .....              | 17 “     |
| “ “ 35 years.....                 | 45 “     |

<sup>11</sup>*Causes for which Applicants to Training Schools were Rejected:*

|                  |               |
|------------------|---------------|
| Educational..... | 133 instances |
| Age.....         | 85 “          |
| Health.....      | 75 “          |

<sup>12</sup>*Supply of Textbooks and Uniforms:*

|                       |            |
|-----------------------|------------|
| Replies received..... | 94 Schools |
| Uniforms free.....    | 47 “ 50%   |
| Material free.....    | 8 “ 9%     |
| Text-books free.....  | 21 “ 22%   |



<sup>13</sup>*Length of Annual Vacation:*

|                  |    |
|------------------|----|
| Three weeks..... | 47 |
| Two weeks.....   | 46 |
| Four weeks.....  | 3  |

<sup>14</sup>*Shortage of Graduate Nurses:**1915 compared with 1920*

|                                     |       |
|-------------------------------------|-------|
| Replies received.....               | 72    |
| Number of graduates in 1915.....    | 1,138 |
| Number of graduates in 1920.....    | 1,519 |
| Schools with increased output.....  | 46    |
| Schools with decreased output.....  | 17    |
| Schools with stationary output..... | 9     |
| Communities short of graduates..... | 45    |
| No shortage of graduates.....       | 46    |
| Shortage for private duty.....      | 26    |
| Shortage for institutions.....      | 8     |
| General shortage.....               | 8     |
| Shortage for midwifery.....         | 5     |
| Shortage for infectious cases.....  | 2     |

*Shortage attributed to:*

|   |    |
|---|----|
| Preference for public health or institutional work..... | 11 |
| Conditions in private homes.....                        | 11 |
| Emigration to U.S.A.....                                | 6  |
| Increased demand for graduates.....                     | 5  |
| Marriage.....   | 5  |

*Question:* "The following points have been advanced to explain the shortage of student nurses. From your general observation and without particular reference to your own school, what importance do you attach to each of these?"

| <i>Answers:</i> .....  | <i>Yes</i> | <i>No</i> |
|--|------------|-----------|
| Other occupations are more attractive.....   | 53         | 20        |
| The hours of duty are too long.....  | 50         | 26        |
| The living conditions are uncomfortable.....   | 46         | 24        |
| The lack of salary during training.....  | 39         | 31        |
| The nursing profession is becoming commercialized....                                      | 40         | 18        |
| After leaving High School I have to wait about 3 years until I am old enough to train..... | 35         | 12        |
| The food is poor or monotonous.....  | 37         | 31        |
| There is too much menial work.....   | 34         | 36        |
| I feel the lack of home and social connections.....  | 32         | 30        |
| The vacation is inadequate.....  | 27         | 36        |
| The educational standard for entrance is too high.....                                     | 17         | 59        |
| There are too many restrictions when off duty.....   | 10         | 54        |
| Three years is too long to spend in training.....  | 7          | 79        |

# The Canadian National Association of Trained Nurses

## REPORT OF THE FORMATION OF A PUBLIC HEALTH SECTION

THE membership of the Canadian National Association of Trained Nurses, comprises practically all graduates of the recognized schools of nursing, who are practising in Canada. Building upon the traditions of the past and sometimes restricted by them, the leaders in the profession are attempting to meet new opportunities and to develop the many types of nurses required in Canada.

Preventive medicine is opening up new fields of service to the graduate nurse, as evidenced by the reports presented at this National Public Health Convention. When the nurse is employed by public and private organizations for the primary purpose of maintaining health rather than in the care of the sick, she becomes known as a Public Health Nurse, though the form of organization and the nature of her duties may vary.

The older and newer forms of service are frequently blended, making it a debatable question, whether she is or is not a Public Health Nurse. It is sometimes claimed that the title should be reserved for those employed by Departments of Public Health, but since health work is carried on by many philanthropic agencies and industries, independently, or in co-operation with public health departments, the Canadian National Association of Trained Nurses has decided to use the title in its functional, rather than in a departmental sense. In order more fully to develop the new type of nursing, the Canadian National Association of Trained Nurses has organized a public health section in which it is hoped all the members interested in public health work will be enrolled.

Each Province, with the exception of Prince Edward Island, which has not yet formed a Graduate Nurses Association, has elected a representative whose duty it will be to enroll public health nurses in their Section of that National Organization. Progress has already been made in every Province. The officers appointed are: Chairman, Miss Elizabeth Breeze, Supt. of School Nursing, Vancouver, B.C.; Vice-Chairman, Mrs. Charlotte Hannington, Supt. Victorian Order of Nurses for Canada, Ottawa; Secretary-Treasurer, Miss Muriel Mackay, Industrial Nurse, Hydro-Electric Power Commission of Ontario, Toronto.

With the co-operation of the Provincial branches of the Canadian Red Cross, the past year has brought amazing developments in Public



Health Nursing. The interest of the Universities has been aroused in the education of Public Health Nurses. Courses in public health nursing, with a total enrolment of 148 graduate nurses have already been begun in six Canadian Universities.

Vancouver—(a) 5 year course in Arts and Nursing (including Public Health). (b) 4 months course in Public Health Nursing.

Halifax (Dalhousie University)—6 months course, in Public Health Nursing.

Toronto—8 months course, in Public Health Nursing.

Montreal (McGill University)—(a) 8 months course in Teaching and Administration in hospitals. (b) 8 months course in Public Health Nursing.

London (Western University)—8 months course in Public Health Nursing.

Edmonton (University of Alberta)—3 months course in Public Health Nursing.

Leadership in the development of Public Health Nurses should come from the graduates of these University courses, who will identify themselves with every form of health service. It is not possible or necessary that all the public health nurses should have received post graduate training but the nursing profession looks to the graduates of these new departments to discover and develop the necessary types of workers.

The Public Health Section of the Canadian National Association of Trained Nurses will provide the nurses with an opportunity for assembling their experiences and to study the many new problems presented for solution.

*The Canadian Nurse*, the official magazine of the nursing profession will we hope record some at least of the achievements and failures of this newest branch of the profession. It is hoped that this new organization may have the co-operation of the National Public Health organizations since its object is to develop more efficient public health nurses for the work in which those organizations are interested.

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## The Victorian Order for Nurses

THE Victorian Order of Nurses for Canada held on June 8th, 1921, perhaps its most important annual meeting since its organization twenty-three years ago. Changes have been made on very broad and constructive lines, allowing for freedom of action as is in keeping with the forward movement of the Canadian Public Health policy.

This work can no longer be carried on by one agency, not even the governmental departments of the different provinces, but must be effected by the closest co-operation of all interested in the actual work. The Victorian Order of Nurses for Canada as a national Public Health Organization must above all others have "the forward looking vision". It was this habit of "seeing visions and dreaming dreams" that led a handful of women in Vancouver and Halifax to pass the inspiration to Lady Aberdeen in 1897, resulting in the birth of the Victorian Order of Nurses for Canada as rather an unwelcome child, with very little provision for its maintenance and the prospect of having "its own way to make in the world".

The Order has one great asset, twenty-three years experience in what was a pioneer field, and all this means in mistakes and valuable experience gained thereby. It would be well for many of the organizations entering the field to-day to profit by this garnered wisdom, instead of spending other precious years experimenting to gain what has already been proven.

On the other hand, the Order has "acquired merit" as Kipling says by eliminating from its policy methods of training and procedure which experience has taught are not progressive.

The annual meeting of the Board of Governors was called for June 8th and some months prior to that time the Chief Superintendent was instructed to summon to Ottawa the District Superintendents and such other executive nurses as could be spared from their posts to confer together and with the Executive Council so that some definite policy of progress could be presented to the Board of Governors.

This Conference of Nurses proved very fruitful in results. The question of public health nursing as a whole was considered, from the old district or bedside nursing,—the first form of public health nursing undertaken in Canada,—on through the twenty-three years of pioneer effort, broadening into the steadily advancing specialized form of nursing service as it is done to-day.



It was deemed necessary for the Victorian Order of Nurses to define Public Health nursing as understood by them and in harmony with the opinions of the best authorities of the Mother Country and the United States of America.

The aims and objects of the Order were drawn up at a time when Canada had no public health organizations, medical or nursing, to define its activities. It is a remarkable fact that the Honourable Mr. Justice Burbridge and Sir John Bernoit set so high a standard for the protection of the public, without professional advice, as that stated in our Royal Charter.

The nurses of the Order in conference requested that section 5 (a) of the Royal Charter:

The Objects of the Order are:

"To supply nurses, thoroughly trained in Hospital and District Nursing and subject to one central authority, for the nursing of the sick who are otherwise unable to obtain trained nursing in their own homes, both in town and country districts."

be changed to read:

The Objects of the Order are:

"To supply nurses, thoroughly trained in Hospital and Public Health nursing, and subject to one Central authority, for the nursing of the sick, the prevention of disease, and the promotion of health."

The substitution of the words "Public Health Nursing" for "district nursing" as the paragraph now reads will bring our work into conformity with the efforts of all agencies giving such service in Canada. The change in the latter part of the paragraph which reads, "for the nursing of the sick, the prevention of disease, and the promotion of health" will convey to the public consciousness the new hope that while we minister to-day as in former years to relieve the actual suffering of the sick at the bedside, we intend, by the wider application of our knowledge to ultimately mitigate disease and suffering. This is commonly expressed as "educational and preventive work".

During the past years many agencies have been trying to define the term "public health". In the altering of the term "district nursing" for the modern "public health nursing" it was deemed wise that the Victorian Order define this term, this definition to be embodied in the Royal Charter as follows:

"Public Health Nursing is a branch of Nursing service which includes all phases of work concerned with family and community welfare, with bedside nursing as a fundamental principle and developing from it all forms of educational and advisory administrative work that tends to prevent disease and raise the standard of the health of the community."

These amendments met with the approval of the Board of Governors and were accepted by them, evincing that in common with Mr. Justice Burbridge and Sir John Bernoit the Board intends keeping this service in the fore-front of progress so long as Canada shall have need of it.

The second important decision made at this Annual Meeting was in connection with postgraduate training in Public Health. As most Canadian Universities have established standard courses with a well balanced curriculum in academic and field work which meets with the approval of the Public Health authorities and the National Association of Trained Nurses it was decided that we provide scholarships for fifty graduate nurses to enter for the year 1921-22. These students being required to pledge themselves to one year's service with the Victorian Order upon completion of the Course. The Victorian Order of Nurses for Canada gives supervised field work in connection with these courses. This will standardize Public Health training all over Canada.

Another subject of importance was discussed, namely, the question of provincial organization. This will be very fully gone into in the autumn when the Executive Council intend making considerable changes in the methods of carrying on the work.

The executive nurses of the Order are preparing a *Manual of Routine* in order that the work may be conducted in a perfectly uniform manner. This has been done in the past and it was deemed wise to crystallize these methods into printed form for the future good of the nurses of the Order.

A council of nursing will be formed which will act in an advisory capacity to the Executive Council.

Dr. M. T. MacEacheran, President of the Vancouver Provincial Association gave the Executive Council one day of his time whilst in the East, which should result in the strengthening and advancement of the work of the Victorian Order of Nurses for Canada.

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## Social Background

### NEIGHBOURHOOD WORKERS ASSOCIATION REPORT FOR YEAR 1920-1921

|  |     |
|--|-----|
| New cases for which full responsibility was assumed..... | 133 |
| Cases accepted for consultation only.....                | 253 |
| Total.....   | 386 |

Two thousand years ago a woman was stoned to death in public for committing the unpardonable sin—the breaking of the seventh commandment. To-day in any of the old churches in Scotland a visitor can see for sixpence the “Penitents’ Bench” and other instruments of torture used within the last few centuries to punish the same offenders. Within more recent years the matter has been left severely alone, never being mentioned in public or even thought of in private by people who considered themselves respectable. And all this time the illegitimate birth rate has steadily increased as none of these methods have led to an intelligent understanding of the problem. We do not claim now that we have discovered any infallible remedy for the evil but we do feel that we are travelling in the right direction when we devote our best efforts to a careful and serious consideration of the underlying causes so that effective, preventive and remedial measures can be taken. There is just one way in which this can be gained—through a personal intimate knowledge of the only people on earth who know anything about the subject—the parents, who have arrived at this holiest of human experiences by such an unhallowed road. For this purpose the Department for Unmarried Mothers was created.

The work in this Department is carried on in very close co-operation with other social agencies in the city. When illegitimate births are reported to the Public Health Department the nurses in the districts and hospitals refer the cases to this office and the responsibility in the matter is divided between the nurses and our workers, according to the nature and needs of the patients. The agency which seems best equipped and adapted to cope with any particular problem assumes full responsibility, the other acting in a consulting capacity. The same co-operation exists with the institutions when such care is necessary for a mother and baby during the nursing period, but unless it is considered a permanent institutional case, the caseworker makes the ultimate plans for them

and undertakes the future supervision. But with the great number of problems of this sort needing adjustment and the formidable difficulties usually involved, it requires constant consultation and all our combined efforts taxed to their utmost capacity to make any headway at all. Even then we often feel that we are not coping with the situation but merely scratching the surface.

The girls coming to us vary in type from the low grade mental defective to the intelligent well educated stenographer or teacher. Between these extremes are the domestic, factory worker, waitress, telephone operator, sales girl, dressmaker and girls in every occupation and our policy must be sufficiently elastic to include them all.

It almost invariably happens that the finer girl of every type wishes to keep her baby although it is almost a superhuman undertaking, but that effort seems to be the making of her. It is these girls who need their income supplemented and our constant support and encouragement.

Sometimes it seems necessary to separate mother and child but these mothers constitute the most difficult cases for supervision for it is the girls whose babies have died or been adopted who comes to us for help in their second pregnancy.

For the last year, we have been carefully following the career of a young girl who very obviously needed her baby. As long as she was kept in close touch with the child, she was a good mother and her conduct has been all that could be desired. But whenever she has been relieved of that responsibility there have been unmistakable symptoms of a moral collapse. Consequently we have felt justified in persistently discouraging her frequent desire of adopting the child and have forced the burden on her, at the same time making it possible for her to bear it financially and otherwise. It has been a long hard struggle but we felt it was worth while as the girl's ultimate welfare and happiness were at stake and so it has turned out. She has since married, but with a physical disability which prevents her from again experiencing the joy of motherhood and this baby, once an outcast, has become the most precious and indispensable member of the little family.

Recently one of our workers was called over the long distance telephone by a young mother who had previously showed the greatest courage and patience under the most trying circumstances. She wished to report a very satisfactory and happy solution of her problem, and to express her appreciation of all that had been done for her by the Association. Our worker reminded her that positively nothing had been done for her and that if her troubles were over the credit was entirely due to herself. "But you do not know", she said, "what a help it was to feel that I could go to you at any time and talk things over as a friend without being made to feel like the most hopeless sinner on earth".



Sometimes we can best serve these girls by providing for them financial help or legal or medical advice. Sometimes by securing a position for the mother and a boarding home for her baby. Often we can act as a medium between her and the child's father, protect her from public humiliation or effect a reconciliation between her and her relatives. But more than anything else they seem to need a friend who will help them up when so many forces are tending to push them down, someone who has faith in them and will develop their faith in themselves, that they "May rise on stepping stones of their dead selves to higher things".

The new Act passed by the Ontario Legislature "For the Protection of Children born out of Wedlock" whilst not all that could be desired, should go a long way toward a more equal division of responsibility. The penalty for a wrong committed by two people has heretofore been paid only by one and usually involves, with cruel injustice, the third and un-offending party—the innocent child. We anticipate with careful administration of the Act, a very material decrease in the illegitimate birth rate in Ontario.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF APRIL, 1921.

| Diseases                       | 1921.       |           | 1920.       |           |
|--------------------------------|-------------|-----------|-------------|-----------|
|                                | Cases       | Deaths    | Cases       | Deaths    |
| Small-pox.....                 | 383         | 2         | 305         | 4         |
| Scarlet Fever.....             | 365         | 7         | 487         | 12        |
| Diphtheria.....                | 409         | 34        | 418         | 58        |
| Measles.....                   | 284         | 0         | 1618        | 27        |
| Whooping Cough.....            | 165         | 16        | 135         | 17        |
| Typhoid.....                   | 32          | 5         | 33          | 14        |
| Tuberculosis.....              | 196         | 121       | 223         | 193       |
| Infantile Paralysis.....       | ...         | ...       | ...         | ...       |
| Cerebro-Spinal Meningitis..... | 7           | 6         | 7           | 5         |
| Influenza and Pneumonia.....   | 90          | 30        | 177         | 143       |
| Primary Pneumonia.....         | ...         | 250       | ...         | 302       |
|                                | <hr/> 1,931 | <hr/> 471 | <hr/> 3,403 | <hr/> 775 |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

|                 | April.<br>1921. | April.<br>1920. |
|-----------------|-----------------|-----------------|
| Syphilis.....   | 219             | 93              |
| Gonorrhoea..... | 236             | 137             |
| Chancroid.....  | 1               | 7               |
|                 | <hr/> 456       | <hr/> 237       |



### SMALL-POX CASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF APRIL, 1921

| County                   | Municipality | Cases | Dths. | County                    | Municipality | Cases | Dths. |
|--------------------------|--------------|-------|-------|---------------------------|--------------|-------|-------|
| Brant—Brantford.....     |              | 11    | 1     | Parry Sound—Parry Sound   |              | 5     | 0     |
| Burford.....             |              | 2     | 0     | Hagerman....              |              | 16    | 0     |
| Carleton—Ottawa.....     |              | 116   | 0     | McKeller....              |              | 1     | 0     |
| Nepean.....              |              | 14    | 0     | Perth—Stratford.....      |              | 1     | 0     |
| March.....               |              | 4     | 0     | St. Marys....             |              | 3     | 0     |
| Fitzroy.....             |              | 1     | 0     | Elma.....                 |              | 4     | 0     |
| Elgin—St. Thomas.....    |              | 11    | 0     | Prescott & Russell—N.     |              |       |       |
| Essex—Essex Border.....  |              | 3     | 0     | Plantagenet.....          |              | 4     | 0     |
| Frontenac—Kingston....   |              | 4     | 0     | Prince Edward—S. Marys-   |              |       |       |
| Kingston Tp....          |              | 4     | 0     | burg.....                 |              | 1     | 0     |
| Grey—Collingwood Tp....  |              | 9     | 0     | Hillier.....              |              | 1     | 0     |
| Sullivan.....            |              | 1     | 0     | Renfrew—Raglan.....       |              | 14    | 0     |
| Hanover.....             |              | 5     | 0     | Bagot.....                |              | 8     | 0     |
| Halton—Burlington.....   |              | 1     | 0     | Rainy River—Emo.....      |              | 4     | 0     |
| Hastings—Belleville..... |              | 4     | 0     | Dilke.....                |              | 4     | 0     |
| Deseronto.....           |              | 2     | 0     | Lavallee....              |              | 2     | 0     |
| Huron—Blythe.....        |              | 1     | 0     | Simcoe—Beeton.....        |              | 1     | 0     |
| Kent—Chatham.....        |              | 3     | 0     | Alliston.....             |              | 2     | 0     |
| Zone—Zone.....           |              | 1     | 0     | Adjala.....               |              | 3     | 0     |
| Kenora—Kenora.....       |              | 2     | 0     | Oro.....                  |              | 1     | 0     |
| Lambton—Brooke.....      |              | 1     | 0     | Orillia.....              |              | 1     | 0     |
| Moore.....               |              | 1     | 0     | Stormont D. & Glengarry—  |              |       |       |
| Lanark—Lanark.....       |              | 4     | 0     | Iroquois.....             |              | 2     | 0     |
| Perth.....               |              | 2     | 0     | Sudbury—Sudbury.....      |              | 6     | 0     |
| Beckwith.....            |              | 5     | 0     | Waters.....               |              | 2     | 0     |
| Ramsay.....              |              | 1     | 0     | Copper Cliffe..           |              | 2     | 0     |
| Darling.....             |              | 1     | 0     | Temiskaming—Haileybury    |              | 3     | 0     |
| Leeds & Grenville—Brock- |              |       |       | Waterloo—Kitchener....    |              | 6     | 0     |
| ville..                  |              | 1     | 0     | Wellington—Arthur Village |              | 1     | 0     |
| Lennox & Addington—      |              |       |       | Eramosa.....              |              | 5     | 0     |
| Ernesttown.....          |              | 1     | 0     | Wentworth—Hamilton....    |              | 12    | 0     |
| Middlesex—London.....    |              | 4     | 0     | Barton.....               |              | 3     | 0     |
| Muskoka—Morrison.....    |              | 3     | 0     | Waterdown...              |              | 2     | 0     |
| Nipissing—Ferris.....    |              | 1     | 0     | Dundas.....               |              | 4     | 0     |
| Norfolk—Walsingham N..   |              | 2     | 0     | York—Toronto.....         |              | 10    | 0     |
| Northd. & Durham—Bow-    |              |       |       | Newmarket.....            |              | 7     | 0     |
| manville.....            |              | 7     | 1     |                           |              |       |       |
| Ontario—Rama.....        |              | 1     | 0     |                           |              | 383   | 2     |
| Oxford—Woodstock.....    |              | 4     | 0     |                           |              |       |       |

## News Items

Mrs. Emmeline Pankhurst speaking for the Canadian National Council for Combating Venereal Diseases during the month of May addressed large meetings on the subject of "Social Hygiene" in the following cities: Toronto, Windsor, Winnipeg, Portage la Prairie, Brandon, \*Regina, Calgary, Edmonton, Lethbridge, Medicine Hat, Vancouver and Victoria. Reports from all of these cities indicate that Mrs. Pankhurst's earnest message left a deep impression and that her tour has done much to further the interests of the Council.

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Dr. Franklin B. Royer of the Massachusetts-Halifax Health Commission was a forceful and useful speaker in various parts of New Brunswick during the recent successful Health Week.

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The Canadian National Association of Trained Nurses has organized a Public Health Section.

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The Ontario Medical Association under the Presidency of Dr. J. Heurner Mullin held its Annual Meeting during the first week in June at Niagara Falls. An especially interesting feature of the meeting was the Round Table Dinner which provided an opportunity for the discussion of many problems in which both the medical profession and the public are greatly interested. This unique departure was one of numerous interesting developments which have resulted from the initiative and energy of the retiring president.

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Miss Jean E. Browne has returned to Canada after a year's study of public health nursing in England and France, where she held the Canadian Red Cross Scholarship in the International Public Health Nursing Course held under the auspices of the League of Red Cross Societies. She will resume her duties as Director of School Hygiene in the Province of Saskatchewan.

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The first film produced by the Pathescope Company of Canada under the direction of the Child Hygiene Section of the Canadian Public Health Association is now available.

It is a two reel film, lasting about thirty-five minutes, and endeavours to teach the proper care of the infant. Mrs. Emory, a middle class mother, who had registered the birth of her baby, Betty, thereby securing



literature from the Health Authorities and advice from the Public Health Nurse, is shown in contrast to Mrs. Doyle, a poor mother, who did not register Baby Jack's birth, and who is found by the nurse, when her baby is the pitiful victim of ignorance, improper feeding, and all the other enemies of infancy.

Among the lessons taught in this delightfully interesting story, are: The proper method of bathing a baby; how to dress a baby; feeding—good and bad; the use of a mask; baby's bed and sleep—indoors and out; and the operation of a Child Welfare Clinic.

For further indormation, write—Child Hygiene Section, C.P.H.A., 206 Bloor St. W., Toronto.

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Miss Laura Holland has taken up her duties as Director of the Nursing and Emergency Department of the Ontario Division of the Canadian Red Cross Society. Miss Holland, who is a graduate of the Montreal General Hospital, served Overseas with the Canadian Army Medical Corps and on returning, took the Social Service course at the Boston School for Social work. During the past year she has been Social Service worker at the V.D. Clinic of the Montreal General Hospital.

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On Monday, May 31st, a meeting of representatives of organizations interested in Child Welfare, was held in Ottawa, under the auspices of the Deputy Minister of Health, for the purpose of electing the officers of the Canadian Conference of Child Welfare and discussing a programme for the coming year.

Mrs. Wm. Todd, who was appointed chairman of the Provisional Executive at the meeting held last October, occupied the chair, and the following officers were elected: President, Mr. J. Arthur McBride, Montreal, P.Q.; 1st Vice-President, Mrs. Wm. Todd, Orillia, Ont.; 2nd Vice-President, Miss Elizabeth Breeze, Vancouver, B.C.; Secretary, Miss Charlotte Whitton, Toronto, Ont.; Treasurer, Mme. Jules Tessier, Quebec, P.Q.

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The Child Hygiene Section of the Canadian Public Health Association have now ready for distribution their miniature school posters.

These are reproduced in colour about post card size and weight, each poster having on the reverse side, a health talk on the subject illustrated.

One set comprises twelve posters, teaching health habits to children, by telling the story of an average day, in the life of a school girl and boy.

Sale price, 5c. a set—express collect. Address 206 Bloor St. W., Toronto.

# Editorial

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## A BETTER PROGRAMME

**I**T would appear that the evolution of the most modern programme for the prevention of disease must necessarily mean a broadening of all of our conceptions of preventive medicine. It seems so short a time since the leech and the barber surgeon held sway. Only yesterday Simpson and Morton discovered their precious gifts for suffering humanity and in the time of most of us Pasteur and Lister opened for the wondering eyes of the world their astounding new chapter in the history of medicine. But the end is not yet.

The multitudes still toil on and suffer. Hospitals multiply, clinics abound that those who have found the pursuit of happiness little more than a fight for life may be cared for, Tuberculosis, ordinary infectious diseases, multitudinous accidents, typhoid fever, industrial diseases, the venereal diseases, they and their kind serve as eternal reminders to us not only that the sick and wounded must be cared for but that somewhere our machinery of prevention is falling down.

Dr. Saleeby's statement at the recent meeting of the Canadian Public Health Association that the campaign against venereal diseases in Great Britain has signally failed was, one is prone to believe, based on statistics as to the increased attendance at venereal disease clinics. Such attendance might easily be a sign rather of success than of failure. The implied suggestion was that fundamental factors, notably alcohol, had been neglected and certainly where the social and moral factors in disease production are forgotten we need not hope for ultimate success, either in the fight against venereal disease or disease generally. Economic conditions, religion, education, housing, recreation, the age of marriage, the quality of food all play their part and must all be considered. Health authorities are beginning to think of these things, but there's a long road yet to travel.

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## Book Reviews

*Pulmonary Tuberculosis.* By Edward O. Otis, A.B., M.D. Boston, W. M. Leonard, 1920. Canadian Medical Association, Montreal. Cloth, pp. 212.

The first edition of this excellent text-book appeared in 1917 under the modest subtitle, a text-book for students. Its title page now carries the more appropriate legend, a text-book for students and practitioners.

In addition to a careful revision, much valuable matter has been added including "The examination of soldiers for tuberculosis", as laid down by Colonel Bushnell, head of the Department of Tuberculosis in the U.S. War Office. There is also included the scheme of Major Stoll on the Essential Points in Physical Diagnosis. We are pleased to see also the "Diagnostic Standards" of the National Tuberculosis Association which form an admirable presentation of the subject.

Numerous well written case histories illustrate various points the author wishes to emphasize. His therapeutics are sane and safe and represent the opinions of a physician who has had a long and varied experience in tuberculosis as well as in general medicine.

Among other subjects, climate, after cure and marriage receive appropriate treatment.

We can highly recommend the work as a most excellent manual on the subject of pulmonary tuberculosis, and though written for the physician and student in medicine will give much information to the social worker, but it is especially for the busy general practitioner and the student that it forms a convenient and concise ready reference manual.

J. H. ELLIOTT.

*Practical Tuberculosis.* By Herbert F. Gammons, M.D., St. Louis; C. V. Mosby Co., 1921. MacAinsh & Co., Toronto. Cloth, Pp. 158. \$2.00.

This small book is probably well conceived but so badly executed as to warrant its withdrawal by the publishers. Murdered English, misleading half truths, and careless statements abound throughout it, and quite spoil a book which contains much of merit. Some sentences which could be multiplied beyond the space available to the reviewer, are here presented: "He (the examiner) must be able to hear and have a stethoscope that is comfortable to the ears *and* auditory canal." "It is very evident that a physician would have a very poor practice who did not have at least twenty tuberculosis patients under his supervision each year." "In nearly all adults one will find fine crackles in the lower

axillary region on deep inspiration; naturally one should be suspicious of tuberculosis in these cases." "The diseased voice transmission is very variable." "Exaggerated resonance is usually an indication of emphysema." "Neuritis is a frequent complication of tuberculosis even in the early stages, and we must consider the possibility of all neuritis attacks as resulting from tuberculous infection." "Blow-ups in tuberculosis are considered due to *extension of the bacilli* through the lymphatics." "Inspiration is voluntary, while expiration is due to the elasticity of the lung tissue and also to the contraction of the chest muscles and diaphragm." "In the healthy adult male about 20 c.c. of air are introduced into the lungs and bronchial tubes during each inspiration." "Tuberculosis patients often lower their temperature by exercise." "Coughing usually results from an irritation in the laryngeal passages." "Vaccination has often lit up tuberculous infections." "Do not forget that Nature has cured many tuberculous persons, and that medicines, vaccines and serums have killed more patients than they have cured." "Resorting to the use of opiates should be delayed as long as possible, *because frequently opiates prolong the life* of these hopeless incurable cases, who have an impaired mind which causes them and their associates much discomfort."

He states that artificial pneumothorax should be given by a specialist, yet goes on to describe the operation in such a manner that if any attempt were made according to his directions, disaster would almost surely follow.

After making a good statement of the value and limitations of the X-ray in diagnosis and pointing out that only good plates are of value, he uses for illustration some four plates whose lack of detail make them as valueless as those he decries.

The names of men prominent in the history of medicine and tuberculosis are frequently mis-spelled and the legends under the illustrations show great carelessness in writing and typography.

There is no excuse for the appearance of a book full of such glaring defects and mistakes.

J. H. ELLIOTT.



## Notes on Current Literature

From the Department of Information on Public Health, Canadian  
Red Cross Society

### INTERESTING ARTICLES IN RECENT PERIODICALS

#### *What is a Health Centre?*

"The Nation's Health", May 1921. Page 265.

Dr. Peterson, National Director of Health Service of the American Red Cross, writes a timely article that should help to mould opinion regarding the organization and function of health centres, which he summarizes as follows: "The health centre is a community health organization standing for creative work, which aims to co-ordinate the efforts of all health agencies, bring the services of all agencies to the attention of the public in such a way that they are used, bring the community to demand, and stimulate the community to work for a higher and higher type of health service".

#### *Health Problems of Women in Industry.*

"The Nation's Health", May 1921. Page 304.

#### *Health in Industry and Efficient Production.*

"National Health", May 1921. Page 312.

#### *The Relation of Posture to Individual Health.*

"The Nation's Health", May 1921. Page 290.

#### *What the Air Does to Us.*

"The Nation's Health", May 1921. Page 265.

The effects of the temperature, humidity and movement of air upon the efficiency and health of indoor workers.

#### *Health Education in Industry.*

"American Journal of Public Health", June 1921. Page 489.

#### *The Education of Health Officers.*

"International Journal of Public Health", May-June, 1921. Page 263.

A review of the general and special educational standards for health officers and an outline of University courses in Great Britain, Canada and the United States.

#### *The Nucleus of the Tuberculosis Problem.*

"International Journal of Public Health", May-June, 1921. Page 225.

The Director of the American Red Cross Tuberculosis Commission considers that the customary forms of propaganda against tuberculosis result only in the waste of time, energy and paper. In his opinion, the

real nucleus of the problem lies in new knowledge gained by scientific research and in the instruction of school children by trained teachers.

*The Anti-venereal Campaign.*

"International Journal of Public Health", May-June, 1921. Page 257.

Professor Gougerot of Paris, summarizes the methods of anti-venereal propaganda in vogue in France. Special emphasis is attached to the importance of courses of instruction in social hygiene.

*The Pregnant Woman in Industry.*

"Journal of Industrial Hygiene", June 1921. Page 39.

*The Prevention of Venereal Infection.*

"The Journal of State Medicine", May 1921.

An excellent symposium discussing this controversial question from three different points of view. Dr. Lyster, of St. Bartholomew's Hospital, London, presents a clear and forceful plea for prophylaxis as an effective means of control. Dr. Bayet, of Brussels, maintains that the present system of prophylaxis is a complete failure, and argues that the most effective means of prevention is the treatment of existing cases. Dr. Lomholt, of Copenhagen, describes the experience of Denmark.

*Venereal Disease Clinics.*

"International Journal of Public Health", May-June, 1921. Page 295.

Lieut.-Col. T. F. Ritchie, of the Division for Combating Venereal Diseases, League of Red Cross Societies, discusses the organization and function of these clinics under the following headings:

1. Situation of Venereal Disease Clinics.
2. General Arrangement of the Clinic.
3. Treatment Rooms.
4. Records.
5. Follow-up work.
6. Personnel.
7. Financial Arrangements.

*Illigitimacy in a Rural Community.*

"The Survey", June 4th, 1921. Page 305.

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# How Child Welfare Work Can Be Assisted in the Rural Districts of British Columbia

BY MISS JESSIE FORSHAW,

ORGANIZER,

Victorian Order of Nurses in British Columbia.

Read at the Annual Meeting of the British Columbia Child Welfare  
Association.

**M**Y travels through British Columbia have not taken me to every little community; nevertheless, I think that I have seen sufficient of rural life to recognize a few of the disadvantages with which the country child is surrounded. True, there are advantages to be gained from life in the open country, so many in fact that are conducive to developing good Canadians, that we should aim to make rural life as attractive as possible, and give to the rural child a few of the advantages which the city child receives.

In considering the rural problems and disadvantages which affect child welfare, it will be necessary to make a classification of its phases. Upon analysis, we find that the general development of the child is dependent upon his physical condition, spiritual and social welfare, and mental development. They are so closely allied that the extent of their respective development depends a great deal upon each other. In considering the child's physical welfare we must recognize that primarily it depends to a considerable extent upon heredity and environment. His mental development depends almost entirely upon the same factors. His social and moral welfare more upon environment.

To deal first with the child's physical well-being, we cannot dodge the fact that the rural communities lack a proper system of public health and school nursing, and I think it is agreed upon that every child should be given an equal chance for health, and children in the rural districts should have the advantages which accrue from school nursing as well as those in the city. The installation of public health nurses is left to the initiation of each local community, which can only result in a haphazard system. We all realize that before there can be successful and systematic

application of any new movement, there must of necessity be educated public opinion behind it, and, to demonstrate any new movement to educate the public, present conditions force a haphazard system of demonstration. However, the health of each community and the lowering of mortality rates, especially infant mortality, should be, and in some countries is a matter of national importance and is considered a state function, not to be left to the pleasure of communities and voluntary organizations.

In dwelling upon this phase of child welfare I wish it to be borne in mind that there are authoritative bodies both governmental and voluntary, whose function<sup>1</sup> is to deal with this matter, and who are carrying on their work successfully as far as lies within their present power, and in mentioning this existent need I do not wish to be misunderstood. The success of any service lies in the allocation of work to the proper authorities, by co-operating, but not over-lapping, the recognition of limitations whether it be organizations or individuals, and the willingness to delegate to others work which can be better done by them.

I cannot pass over physical welfare without mentioning the trouble caused by lack of dental facilities. If some system could be evolved whereby travelling dental clinics, pay and otherwise, could be provided for the rural districts, a great amount of good could be accomplished. It is of little use to preach oral hygiene if there are no provisions made whereby such teaching can be carried out.

Now, to turn to the problem of social and moral welfare. If they depend greatly upon environment we shall have to first analyze contributing factors that make up the environment. The most important are: the home, the school, the child's associates, church or Sunday school, the social life and morale of the community, local industries, resources and wealth, type of recreation and amusement provided for the children. If any of the above factors are at fault, it will usually result in an environment detrimental to the child. The unconscious blending of the surroundings which constitute the child's environment can be made advantageous. In order to get the most healthy environment there should be a particular agency, organization or influence to deal with and build up each factor.

The home may be greatly influenced by the community atmosphere. On the other hand, there may be sufficient wisdom and strength, or indifference, in the home to offset any influence for good or evil which the community may have.



I will not go into detail as to the part each agency can play in moulding the child's environment, but may I pause long enough to mention two agencies, who, in the discharge of their respective duties, can extend them in such a way as to help the home environment. They are the school teacher and the public health nurse. The school teacher can teach subjects to her pupil which go toward making good citizens. Such teaching will be unconsciously introduced to the home by the child himself, and the child becomes the teacher of the parent; and both are unconscious of the fact. The public health nurse has the privilege of entering the home, and through that privilege and many other opportunities she may tactfully help to adjust a faulty home environment.

Unless there is an interest taken in the child's environment as a whole, there will not be the success there should be, hence the need for better co-operation among the various agencies engaged in child welfare, and a point of centralization created providing the means whereby co-operation can be engaged in with some organized system before we can expect co-operation. We must get some system so that we will know how to co-operate.

While we are still on the subject of social welfare I wish to impress a most important need—more organized recreation and play.

One of the greatest drawbacks to living and bringing a family up in the rural districts is the lack of proper facilities for education and recreation, which are possible in an urban population, and which it demands. Life is more isolated in the country, naturally, than in congested centres, or even small towns, with the result that children are not trained for the competition which they meet with in the city. The rebound from an early environment in the country to the conditions of the city is apt to bring in its train unhappy and painful results. Every child should be trained in the principles of clean, healthy play and amusement, so that when he is called upon to make the decisions which life in a city force, he will not be handicapped by lack of clean, honorable principles. When we pass over the possibilities of play we are overlooking a great educational factor. There is a great tendency to overlook play and recreation in the rural districts for the very obvious reason that there are not at present the proper facilities for conducting proper play and recreation, nor does there seem to be sufficient public awakening to the great educational value of play.

Much could be done to correct this condition, but it needs some

organization to take charge of this work and aim to put rural social life on a better basis, especially for the children.

The Playground and Recreation Association of America takes charge of this division of work in the United States. With this association are affiliated various other organizations whose aim is to improve community life, both urban and rural. Its aim is to supply information, assistance regarding the organization of clubs, playgrounds, forms of recreation, and to supply instructors, playground supervisors, etc. I was anxious to start some club work in a rural district for the school children and those of 'teen age, to whom I could write for information and ideas, as I wanted to pick out some form of organization which would suit the community. Perhaps it was due to my ignorance, but I did not know of any organization in British Columbia, or in Canada for that matter, which could supply me with the information I needed. My difficulty only represents the difficulties of others should they be anxious to organize some form of community recreation and children's clubs.

I would like to take this opportunity to suggest that a Bureau of Recreation and Playgrounds for urban and rural districts be created, if there is not already such a bureau in existence. I think that this bureau could quite well form a department of the Provincial Child Welfare Association, and be under its direct supervision. The concrete result which I would like to see accrue from this paper is the creation or more active development of such a bureau, and I hope it will form the nucleus of discussion in connection with this paper, provided it is worthy of one.

Before leaving the problem of organized and supervised play for the rural districts, I must point out that it would be impractical and too expensive to engage salaried play leaders. The only way in which to get around the problem as far as I can see is to get the closer co-operation of the school teachers. I think that some teachers are supervising or leading their playgrounds already, but it is only sporadic. There should be some organized system for dealing with this. The Federation of School Teachers for British Columbia would, I am sure, give any such movement their heartiest co-operation if they were approached from this association. In addition, may I suggest that the Teachers' Summer School might include more lectures dealing with child psychology and the social life of the child, and how to develop good playgrounds, recreation centres, etc.



But please do not shift the recreation problem to the School Teachers' Association entirely.

Without a department or bureau to handle the question of playgrounds and recreation the teachers will only have to do as I have done—apply to American organizations, and with all due respect to the United States, is there anything to prevent Canadians attempting at least to solve their own problems? I trust that I have made my object clear. The need of a central bureau to deal with playgrounds and recreation for urban and rural centres throughout British Columbia.

With that object firmly fixed in mind, let us turn from the social and moral welfare of the child to his mental and intellectual development. I must, however, first apologize for encroaching upon a science which I have not been educated or trained for, but in my association with rural schools the fact that there are so many feeble-minded children in our public schools has been so painfully demonstrated to me, that I cannot pass by without saying something in regard to the matter. I can only hope, in so doing, that those who are an authority on the subject of mental and nervous conditions will better explain that which I have clumsily but sincerely tried to say. I can truthfully say that I have never yet visited a rural school but what I have found one or more feeble-minded children there, and in the last analysis, when our problems of social welfare have all been sifted and weighed our greatest stumbling block to social progress is the high grade moral and mental deficiency of various kinds and the social problems caused by and through them. Until that problem can be solved we are pouring all our efforts along social welfare into a leaking barrel. True we cannot initiate any drastic measures to remedy this condition; we must first have the backing of public opinion which can be secured only through education. But I think much more could be done.

I do not think that I am altogether Utopian when I picture travelling psychologists or mental specialists who will visit the rural schools upon the same basis as the medical school inspector and school nurse for the purpose of finding the mentally defective or any symptoms of mental disease, as does the medical man for physical defects. A chain of psychiatric clinics attached to the larger hospitals throughout the province, which can be used for the observation and diagnosis of mental cases, with special schools provided for the feeble-minded and a follow-up system of mental hygiene nursing.

Sometimes I think that people tire of hearing the problems of the rural districts sounded, but the fact remains that if we are to have a healthier, better race, and if the country is the ideal place for the nursery of the nation, we must remove some of its big disadvantages, or the nursery will not be giving to the nation the kind of men and women we need.

With determination, time, patience and a few other virtues we can and will succeed, not for ourselves alone, but for the future of our sons and daughters—for Canada—and our Empire.

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## Child Welfare\*

By B. FRANKLIN ROYER, M.D., D.Sc., *Executive Officer Massachusetts-Halifax Health Commission*

SIR WILLIAM OSLER, in one of his memorable addresses to medical undergraduates of Toronto University, said: "More than any other, the practice of Medicine may illustrate the second great lesson of Plato, that we are here not to get all we can out of life for ourselves, but to try to make the lives of others happier. . . . The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your head will be exercised equally with your heart. Often the best part of your work will have nothing to do with potions or powders but with the exercise of your influence of the strong upon the weak." Prophetic almost were these words of the greatest physician Canada has yet produced, of the doctor equally great in England and America.

As medical men, we all have been taught similar lessons and yet it has only been within recent years that most of us have been able to apply these high principles in any way except at retail in individual cases in practice.

Probably there is no place in to-day's programme where the general practitioner and the public may meet on common ground, and where the art of medicine, the high calling of medicine, may add so much as on the common ground of child welfare. The first essential thing for any community programme along the line of child welfare is to produce a community conscience, an atmosphere demanding fair play and suitable provisions for rearing the young. Every community has need of some sort of programme for child welfare. Whether the programme be put

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over by volunteer organizations, by charitable and philanthropic organizations, or by properly constituted legal authorities make little difference. The programme will be successful only as the community conscience is stimulated, and as the community endorses the programme.

Child welfare work is social, sociological, common sense, and medical. General practitioners of medicine sometimes have been known to be timid about engaging in such programmes purely from selfish reasons feeling that it might encroach upon their private practice, some with old-fashioned notions that each doctor should look out for and advise the poor in his own bailiwick; still others held aloof because of the old-fashioned medical ethics that a doctor's name must not appear as having had part in any public or semi-public movement except with things strictly professional.

The great social programmes developing in connection with war work have rapidly dissipated all of these notions, and has put the doctor in close social contact with his fellowman. This change has made doctors look upon a part of their services to the community as a pure social service rather than as a source of personal gain. Strange as it may appear, however, we have not yet been able to find a single doctor, even though giving much time to social service, that has reported regret because of such devotion of time, or one who has reported a single dollar's loss in income because of it.

Nowadays we come to look upon our duty in educating the young medical man, to teach him something of his duties in social medicine. For several years at least students in certain medical schools have been given a smattering of social service, and one medical school for women gives a splendid public health social course.

In a paper by Dr. Bolt before the Child Hygiene Association last year he urged that every medical student be given training in a child welfare clinic or well baby centre; and at that meeting his paper was one of three, all dealing with the relation of the doctor to child welfare. Undoubtedly, if we are going to do our utmost for the child we must co-ordinate all child helping agencies and give them medical assistance, guidance and advice where needed. This is the problem of the present and of the immediate future, and to meet the problem squarely and efficiently is the problem of the hour.

With the conclusion of the war and the launching of the efforts of the greatest mother of the world, the Red Cross, in a peace time programme, with the tremendous impetus given to public health by the returned soldier, doctor and private, carrying home lessons as to what may be done by applying preventive medicine, health authorities everywhere came up on their toes, thus making possible one of the best co-ordinated and most aggressive health campaigns planned in the history



of the world. These campaigns naturally take their beginning about the most popular thing in the world, the baby. Catching the spirit of the word, all preventive medicine naturally planned, to prevent many of the birth catastrophes that occur by getting the mother as early as possible after conception, educating her and guiding her into the proper care of herself, and preparing her to bring into the world one likely to develop into a worth while citizen physically.

Every community that undertakes prenatal care must be prepared to supply a skilled teacher for this phase of work. Probably there is no teacher whose foundation training quite so well fits her for this type of educational work as the trained nurse.

I do not mean the trained nurse just graduating from a hospital training course, but preferably a nurse trained in a first class hospital taking maternity cases and children, then given some private nursing experience, then a well-rounded course in social service, general public health nursing, tuberculosis teaching, general sanitation, prenatal, infant, and child welfare. Such a nurse may enter the home, may teach the mother those rational physiological needs and physical care that she should give herself at such time. While it is true that she may perhaps by this very correcting of the faulty methods of living, keep some mothers from the necessity of employing a doctor, for every such case of illness averted and for each child diverted from the doctor's office at least half a dozen will enter it. The nurse with her trained eye will be quick to detect deviations from the normal and will head the mother off to the doctor's office with the baby perhaps weeks before she would otherwise go.

I have talked with many doctors, some of them in the start opposing this sort of teaching in the community, but I have been unable to find any one, after such demonstrations have been carried on for a time, who did not welcome the work and who would not have been the first to cry out against it had anything been done to discontinue it.

To properly put over a child welfare campaign in any community there must be a centre from which the work will radiate, a county clinic, a city clinic, a community clinic; or, I like it by the name *Health Centre*, a place where advice is sought and where advice is dispensed; a place where medicine is sometimes sought and medicine occasionally (very rarely) dispensed. This is the sort of place planned by your splendid Provincial Health Officer some two years ago. This is the sort of health centre that is going to be promulgated soon in nearly every county in this Province, most of them within the year under the stimulation of the Provincial Health Department, supported in part by County Councils and supported most magnanimously by the Nova Scotia Provincial Red Cross.

It is planned in all of these centres to have clinics for the expectant mother, clinics to keep the baby well, clinics to supervise children until they reach school age, clinics from which the nurse may reach out into the school and conduct routine examinations, a service that will screen out and place before the doctor all gross defects for systematic medical examination and classification. The nurse in turn will follow on into the homes of those who are found defective and literally carry many of them to the office of the doctor and even accompany some of them to the office of the specialist if the family doctor so recommends. In the course of a few years those of you who are in general practice will find that in your clientele the blocked nostrils, the tonsils touching in midline, the bulky adenoids that so often harbour infection causing middle ear disease, etc., all of these things will be coming up for early correction. You will not then be meeting in the home of the sick child those conditions that make you dread the ultimate result so often disastrous where the acute infectious disease develops into handicapped children.

There is nothing that so distresses a doctor as to lose a child and yet how many of us have seen patients die from the acute infectious disease where recovery would likely have occurred had they not met the infection with some physical handicap that made it impossible for them to surmount the infection. How many have died because the opportunity to start life with a good physical equipment was not afforded the child.

As medical men, you will be interested to recall that some of our views along the lines of prenatal care and child welfare are not entirely new and those of you with an historical bent of mind may have at some time looked up some of the writings of Soranus, a Greek physician practicing in Rome some time between 98 and 130 A.D.

You may recall that Trotiski, a Russian, in 1895 published in parallel columns the pediatric teachings of Soranus, contrasting it with that of modern nineteenth century pediatricians, and in some particulars the older physician had equally progressive ideas as the present day physician. With the exception of swaddling clothes and some revision of his advice about wet nursing his child welfare preachment was splendid. I fancy if old Soranus were alive he would not have taken up modern milk formula for feeding babies. He preached breast feeding.

In a splendid address a short time ago by Dr. Helen MacMurchy, the Chief of the Division of Child Welfare of the Federal Department of Health at Ottawa, she said in speaking of modified milk that when knowledge of this percentage scheme of feeding of infants became fashionable the doctors unfortunately "fell for it." She might well have said the babies fell by the wayside because of it.

It is going to take a long time to offset the early influence of percentage infant feeding with modified milk. When the doctors took it



up generally and with the best of intentions even if mistakenly, the manufacturers of various milk foods saw millions in it. Every doctor's office in the world has been flooded with modified milk literature ever since. The manufacturers watch the birth announcements in the daily press, and immediately the home is flooded with modified milk formulae and other literature. It is not, then, to be wondered at that the poor mother, with advice on every hand telling her how to bring up the baby on modified milk, should be too ready to give up breast feeding and put her baby on the bottle.

I have known doctors repeatedly, with but the slightest bit of disturbance on the part of the baby, tell the mother that her milk was not agreeing with the baby and that she should wean it and put it on the bottle. Often it was the worst possible advice that could have been given for mother and baby.

It is very rare indeed that mother's milk will disagree with the baby sufficiently to justify discontinuing its use. Regular interval feeding, dilution of the milk in baby's stomach by giving a few teaspoonfuls of boiled water in advance of the milk feeding is often all that is necessary. Every nurse should insist upon the mother seeing her duty and doing it in regard to the baby. Where the mother has milk she may easily be persuaded to keep on nursing. Many a poor mother has failed to develop milk because of improper application of the baby to the breast and because she immediately started the baby taking water from the nipple of the nursing bottle. The youngster, no longer hungry, failed to apply sufficient suction to stimulate gland secretion in the breast itself. Such a simple little thing as giving the baby the little water that it may need by a teaspoon rather than with a bottle with a nipple and after nursing rather than before nursing may make all the difference between baby going to the breast hungry and likely to nurse properly and vigorously and that of failure.

Why do I go into these details so largely medical in character in speaking on a child welfare programme or on the infant side of it? Only because doctors so constantly fail in dealing with the public to make those who ought to know better appreciate that the smaller things that may seem trivial mark the dividing line between success and failure. I mention these things because they bear no relation whatever to the dispensing of drugs and to impress the need of avoiding their use where detailed advice alone is required. I mention these things because they represent types of medical knowledge that need to be applied in an educational campaign, types of knowledge not likely to be had by lay groups.

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# The Prevention of Amblyopia as a Sequel of Squint by Early Treatment\*

BY WALTER WRIGHT, M.D.

**A**MBLYOPIA ex anopsia has long been recognized as a result of squint or strabismus, so much so that we have come to look on one more or less blind eye in adult life as a natural sequence of a cross eye in childhood. This condition is far more frequent than is commonly supposed. Statistics on a large scale are very difficult to obtain but I think that one would be safe in stating that at least one in every 100 people have an amblyopic eye as a result of strabismus. Mr. R. E. Hanson, oculist to the Education Department of the London County Council, in examining over 10,000 children found a constant squint in 2.47% of the cases or about 1 in 40. As the vast majority of these would have amblyopia, it would point to 1 in 100 being an exceedingly conservative estimate.

The recent war brought home to many of us as never before the importance of this question. In recruiting days one was struck by the large number of men who had to be rejected on account of amblyopia in the right or shooting eye. Again those that were accepted have cost the country many thousands of dollars in pensions because, unlike a man with two good eyes, when their good eye was injured they became cases of practically total disability. I can assure you that this did not happen in only an isolated case here and there, but was of comparatively frequent occurrence.

In peace times we find the same condition in Workmen's Compensation cases. In the first place, the workman with an amblyopic eye is a "poor risk" in almost every form of work. Because of his binocular vision and poorly developed sense of perspective, he is more liable to accident, and, as with the soldier, if his good eye should become damaged he becomes a case of total disability.

Now the point that I wish to make to-day is that amblyopia is not a necessary sequel of strabismus. In fact the definite statement can be made that in nearly every case of squint, a child, if seen early enough, can be cured by proper treatment and by cure, we mean the eyes made straight, with not only good vision in each eye separately but with binocular single vision.

The general idea among the public is that a child "grows out of" a squint as he or she gets older, and unfortunately this idea is not confined

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to the laity but is held to a greater or less extent by a very fair proportion of the medical profession. In both hospital clinics and private practice, we find that where a child is not brought to the oculist for consultation in the early stages, in the majority of cases it is not because the mother is not sufficiently interested in the welfare of the child but because she has previously consulted her doctor and been advised to wait and see if the eye would not come all right by itself. This condition can and must be overcome by bringing the matter before the medical profession generally, more than has been done in the past.

Where the mother has not taken her child to the doctor, we generally find that she has consulted an optician or optometrist—frequently working under the title of “doctor”. Here the treatment is, of course, a pair of glasses (which are almost invariably below the required strength) all other treatment being neglected, and, although in a small percentage of cases a cure is effected, in a vast majority the child grows up with an amblyopic eye. This is a much more difficult problem, as, owing to recent Ontario legislation, the optometrist is allowed to treat these cases by ordering glasses.

The rational treatment of squint is founded in part on a study of the etiology, and in part on experience gained from results in untreated cases. The time at my disposal does not permit my discussing these factors in detail but there are a few features that are so essential to a clear understanding of the whole subject that I feel justified in taking them up briefly.

*Amblyopia ex Anopsia.*—Amblyopia is a very broad term used to cover many forms of partial blindness. By Amblyopia ex Anopsia we mean defective vision from lack of education or use of the visual apparatus or part of it. When an adult for some reason develops a strabismus he is immediately conscious of a very annoying diplopia which lasts as long as the strabismus is present. A child, on the other hand, learns almost at once to suppress one image. The result of this suppression or disuse is a rapid falling off in the visual acuity of the eye. From experience we have learnt further important facts about amblyopia. We have learnt for example that the younger the child the more rapidly does the amblyopia develop and not only develop more rapidly but progresses to a much further degree, e.g., a child one year old developing an unilateral convergent strabismus may within two months get such a degree of amblyopia that central fixation is lost. On the other hand a child, first developing a strabismus after six years of age, seldom gets any marked degree of amblyopia. Another important fact learnt from experience is, that by making the child use the squinting eye, the vision can be restored but *only if treatment is begun early* and again the earlier in life the amblyopia starts the shorter must be the interval before treatment is

begun, if one hopes to restore useful vision. Worth has laid down, as a rough guide, that if a child has not squinted more than half his life there is a fair hope of restoring useful vision but this is only a guide and not a rule as individual cases vary to a great extent.

Another point that I would like to mention is the relation to strabismus of the power of fusing the images seen by the two eyes. After many years of painstaking investigation of the development of binocular vision in children and of observation of strabismus, Claud Worth, of London, came to the conclusion that the essential cause of squint is a defect of the fusion faculty, *i.e.*, a defect in the power to fuse the images seen by the two eyes. According to this theory—"In the presence of the fundamental cause the eyes are in a state of unstable equilibrium, ready to squint either inwards or outwards on slight provocation." This provocation may be Hypermetropia as in Donder's theory, poor vision in one eye, motor anomalies, violent mental disturbance, etc. Now this fusion faculty can be trained, but, like the treatment of amblyopia the training must be carried out in early life. Fusion training is most useful between the ages of three and five—after five years of age the results are not very satisfactory and after six or seven years almost useless.

*Age of Incidence.*—According to Worth's figures in over 92% of cases the deviation first appears before the end of the sixth year and in over 75% before the end of the fourth year—the greatest number for any one year appearing in the third year of life. The important factor here is that the great majority of these cases start some years before the school age, *i.e.*, before they come under the eye of the medical school inspector and nurse, so that cases coming to the clinic from this source usually already have amblyopia well developed.

*Treatment.*—Here again the time at my disposal does not permit my entering into a full discussion. Our objectives in treatment should be not only to restore the visual axes to their normal positions but to prevent amblyopia and train the fusion faculty. In fact getting the eyes straight is a secondary consideration except in so far as by doing so early we help to prevent the amblyopia and encourage the fusion power. The first therapeutic measure should be the prescribing of glasses if, after the thorough use of atropine a moderately high degree of hypermetropia and astigmatism is found, as is usually the case. Glasses act in two ways—first by getting rid of the excessive nervous stimulus sent to the converging muscles in hypermatropes and secondly by equalizing the vision of the two eyes (for it is usually the worse eye that squints). The next step in the treatment is the use of measures to cure or prevent the amblyopia by making the child use the squinting eye. This is done by covering the good eye or blurring the vision of it by the



use of atropine *in the good eye only*. When by these means the visual acuity in the two eyes is more or less equal we frequently find that we have converted a constant unilateral squint into an alternating squint—a much more favourable condition. Next comes training of the fusion faculty with the Amblyoscope.

If after a few months' trial with the above measures the eyes do not come straight we should proceed to operative measures. Some surgeons prefer to eliminate the use of the Amblyoscope, proceeding at once to operative treatment claiming that the best method of getting binocular vision is to place the visual axes in their normal relations and then the fusion sense will develop normally. However, whatever method is used all ophthalmic surgeons are agreed that the one essential is *early* treatment. No child is too young to wear glasses or to have an operation if necessary.

Where amblyopia of one eye is so well developed that treatment does not improve it to any extent there is no reason for early operation as the only object then is to get a good cosmetic result which, in the absence of an active fusion sense, can best be obtained when the patient gets old enough to operate under local anaesthetic. This is unfortunately the case in only too large a percentage of the cases we see.

Now if, as I have tried to show, there is a great deal of unnecessary amblyopia what can be done to improve conditions? Much, I believe, can be gained, as in child welfare work generally, by education both among the profession and the laity. We have already seen the effect of talks to public health nurses in an increased number of cases being brought to the Children's Hospital clinic soon after the squint is first noticed. This educational propaganda must emphasize the fact that the mere wearing of a pair of glasses, whether ordered by doctor or optometrist, is not all that is necessary for a *cure* of squint in the proper sense of the word.

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# Address to Graduating Class of Wellesley Hospital, Toronto\*

ELIZABETH G. FLAWS, *Superintendent of Hospital*

IT gives me great pleasure to welcome you to the seventh Graduating Exercises of the Wellesley Hospital Training School for Nurses and to present to you the annual report of the school of nursing. Our school is young in years, but it is attracting women of education and ability who realize the importance of preparing themselves through scientific knowledge, discipline and experience for the services of humanity. Although on all sides complaint is heard of the shortage of probationers we are fortunate in being able to bring into the school classes of well equipped students.

A hospital is primarily created for the care and treatment of the sick. Its school of nursing, while incidental to the accomplishment of this purpose, has its distinct place in the community as an educational institution, in that it prepares the nurse not only for the scientific care of the hospital patient, but also to go out in the numerous fields where the trained work of the nurse has become indispensable to public well-being.

It will be a matter of gratification to all interested in the Wellesley Hospital and the Training School to know that its record is one of constant advancement in all directions. Each year shows an increase in the service rendered, in the demands made upon the school, and also in the number of students. To care properly for this large increase means more nurses, more supervisors, and more teaching, consequently our nursing staff has increased from 12 in the year the hospital opened to 53 this year.

This Training School has had a unique experience. It had its own traditions to build. It did not have traditions handed down to be followed or lived up to—it had to map out its own course. In educational requirements, as well as in ethical principles, we have set a high standard. We have made constant changes; at all times to the betterment of the curriculum.

The educational standard consistently maintained by the Training School is higher than the Nursing Organizations of Ontario require, and is also higher than that which is called for by the regulations of the New York State Department of Education, with which the Training School

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\*June 14th, 1921.



is registered. How we have managed, in the face of difficulties, to achieve and maintain this high standing may point the way to other Training Schools. Lacking scientific equipment, how were we to carry on systematic instruction in academic work? We turned to the Central Technical School with its excellent teaching and fine equipment, and from the inception of our Training School took advantage of this for a course in Chemistry. Three years ago the centralization of teaching in the Training Schools for Nurses in the Toronto hospitals was commenced, the classes being held in the Medical Building of the University. Here lectures were given in Bacteriology, Hygiene and Sanitation, Pediatrics, Medical and Surgical subjects—16 different lecture courses in all.

I would strongly urge that wherever a Training School is lacking in proper educational facilities it should in a similar manner avail itself of all assistance that can be obtained from the existing local schools, colleges or universities.

The pupils of this School have now a three months' affiliation with the Hospital for Sick Children, and in no institution of the kind on the continent is there a broader or more complete training given. The appreciation of our nurses for this course is shown by the fact that ten members of this graduating class received over 90% in their examination in pediatrics. Our pupils also take advantage of the course in Public Health Nursing arranged by the University of Toronto to give student nurses some idea of public health and social service work. In connection with this course the Department of Public Health of the city receives the student nurses for field work, and they thus get a combination of theory with practical work, which is to them of the greatest value. This training is not expected to make Public Health nurses of the pupils, but to give them a Public Health point of view which will be useful to them in any branch of nursing they may choose. The maintenance of high standards in the Training School is not only a matter of importance to its students—in the interest of the patient—it is ever becoming more of a public concern and responsibility, that the nurse may have the broadest preparation to meet the growing responsibilities that are being placed upon her.

The inauguration of a Department of Public Health Nursing by the University is a great step forward, and on behalf of the nurses of the Province I would like here to voice our appreciation to the University, and to the Red Cross, who have made this course possible. We wish the University would go a step further and do what has been done in Vancouver and Columbia University, in New York City and other cities—link up the training schools with the universities by a five-year course, which would give a diploma from the hospital and a degree from the university.

The need of such a course is forcibly impressed upon me by the large number of applicants with high educational qualifications who are below the age limit required for admission to the training school. The great proportion of these are lost altogether to the nursing profession when, by the proposed course, they would spend two years in academic work at the university, and then be ready to carry on their technical work in the hospital. Some friend of the Wellesley Hospital Training School might very fittingly render valuable public service by giving a scholarship to enable some one (or more) of our graduates to benefit by the Public Health course at the University of Toronto. I understand that one hospital in the city has six scholarships, and still another one three.

To the graduating class I would say, with life before you, there are, to my mind, four words most worth considering—duty, service, sacrifice, and compensation or reward.

DUTY—the thing you owe to yourself and to others. There are no degrees in this. Duty is just duty as right is right. We grow through duty done. Through duty left undone we lose self-respect and power to grow. You are intelligent, well-trained young women, you know the value of your work, the need of your service, that it is the glory of life to spend for others, not money, but self. I pass quickly, but never lightly, over what that service means to bodies racked with pain, and minds and souls tortured with the dreads inspired by disease. To pass your days and nights in soothing the one and calming the other is your mission. Are you ready for this, God helping you? The history of our profession answers that question. The lawyer may choose his case, the business man his trade, the engineer his work, but the doctor and the nurse may not. What will be the reward, the compensation? That will depend on how you have met and regarded the meaning of the other words, your duty, your service, and perhaps your sacrifice. Let us remember that Conscience is King of Life. If your duties have been done in conscience, your service been unselfish, your sacrifice unsought, but inflexibly met, then, while you may regret that you have not attained you have no conscience-stricken remorse that you have not tried. And what is money, ease, or bodily comfort worth that it should be weighed in any retrospect of your careers if King conscience can point out any spot where courage balked? And why should sacrifice of self be reckoned if the "King" can smile and lead us up to Heaven without a fear?

And now might I ask you to join with me in your heart and mind in this remarkable and beautiful prayer dating back to the 16th century, the prayer written by a Jewish Rabbi, and conceived by him to be a fitting one to be made by physicians—a prayer which, I think, might even to-day be quite as suitably entitled "A Prayer For Nurses."

"O God, Thou hast formed the body of man with infinite goodness;



Thou hast united in him innumerable forces incessantly at work like so many instruments, so as to preserve in its entirety this beautiful house containing his immortal soul, and these forces act with all the order, concord and harmony imaginable. But if weakness or violent passion should disturb this harmony, these forces would act against one another and the body return to the dust whence it came. Thou sendest then to man thy messengers, the diseases, which announce the approach of danger, and bid him prepare to overcome them. The Eternal Providence has appointed me to watch o'er the life and death of Thy creatures. May the love of my art actuate me at all times, may neither avarice nor miserliness, nor the thirst for glory or a great reputation engage my mind; for, enemies of truth and philanthropy, they could easily deceive me and make me forgetful of my lofty aim of doing good to Thy children. Endow me with strength of heart and mind so that both may be always ready to serve the rich and the poor, the good and the wicked, friend and enemy, and that I may never see in the patient anything else but a fellow-creature in pain. O God, Thou hast appointed me to watch o'er the life and death of Thy creature, here am I, ready for my vocation."

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# A Study in Complement Fixation Tests for Gonorrhoea\*

BY MARGUERITE L. WESSELS, M.A.

**D**URING the last two years the Provincial Board of Health has been asked repeatedly: "Why do you not do Complement Fixation tests for Gonorrhoea?" Last fall the director decided to investigate these tests with a view to ascertaining what value they would be in aiding the general practitioner in the diagnosis of gonorrhoea and in the establishing of satisfactory criteria for the pronouncement of cure. The work done is as yet incomplete and the results so far, while interesting, are unconvincing.

In Report No. 19 of the Medical Research Committee there is a very thorough description of the method used by Dr. Thomson of Rochester Row, London, for *Gonococcus* Complement Fixation tests.<sup>1</sup> The method is necessarily detailed, but a general description may be not out of place at this point:—

The essentials of the test are the same as in the Wassermann test. A patient's serum, complement and antigen are put together until fixation is accomplished, when sensitized sheep cells are added. The readings also are the same, haemolysis indicating a negative reaction, no haemolysis a positive reaction. The main differences from the better known test are: (1) dilution of patient's serum; (2) a specific antigen—in this case made from gonococci; (3) fixation in the refrigerator followed by incubation in a water bath; (4) small amounts of materials, *e.g.*, 0.1 cubic centimetres sensitized cells as compared to 1.0 cubic centimetres in the Wassermann test.

I shall go into detail only in considering the antigen. As it is made up from a growth of gonococci a review of a few of the details involved in the isolation and cultivation of the organism may be of general interest.

In isolating the gonococcus it is useless to attempt work with any except fresh cases of gonorrhoea that have received no medication. The important elements are: (1) careful technique in obtaining the pus, (2) immediate transference of the materials to the tubes of media, (3) maintenance of a warm temperature until the tube is incubated.

\*Read at the annual meeting of the Canadian Public Health Association, Toronto, May 16th, 17th and 18th, 1921.

<sup>1</sup>Medical Research Committee, Report No. 19 The Laboratory Diagnosis of Gonococcal Infections.



After a strain has been isolated it should be transferred every day. After it has been growing for some time it is not necessary to make sub-cultures so often. We found, however, that the cultures did not grow well if they were not transferred at least every five or six days.

The media used for the cultivation is that described by Thomson; and is a variation of ordinary glucose agar. We have consistently used human serum to enrich it. Ascitic fluid serves well, but we encountered difficulties in maintaining its sterility and, therefore, used only serum. Rabbit, horse, and sheep serum were tried but failed to produce growth. In the case of horse serum we obtained a growth for several generations, after which the cultures died. We used 0.5 ccs. serum to a tube containing 5-6 ccs. agar and found that this amount was highly satisfactory. We tried to reduce the amounts, hoping that the organisms might eventually grow without serum.<sup>1</sup> Six strains which had been sub-cultured for a long time responded. They have been growing well for several generations in 0.1 ccs. serum and we hope shortly to eliminate the serum altogether.

Schwartz, in the *Journal of Urology*,<sup>2</sup> advocates the use of rubber stoppers when growing gonococci. He claims that by heating the air in the tube of media and inserting rubber stoppers the oxygen tension is reduced and that this condition favours growth. We adopted the plan but did not do sufficient work comparing different oxygen tensions to corroborate Schwartz. We did find, however, that evaporation was diminished, and that growth in tubes with rubber stoppers as compared with that in ordinary tubes with cotton plugs very much favoured the former.

Beyond controlling such conditions as mentioned we were unable to do anything in cultivating the gonococcus.

If the organism grew at all it was usually in pure culture. If there were any other organisms they were few enough to make isolation an easy matter. After the strains were isolated care was taken to sub-culture daily. In spite of all precautions there were strains that resisted cultivation, or that died after four or five generations. We, therefore, adopted the policy of making an antigen from the first heavy growth.

The antigen is prepared briefly as follows: A saline suspension of gonococci is dissolved in sodium hydroxide, neutralized with hydrochloric acid and made up to a definite volume with saline. Carbolic acid is added as a preservative. Each antigen is tested by itself, then all the antigens are pooled and tested. There should be from twelve to fifteen strains in a good antigen.

Before beginning the gonococcus complement fixation tests the

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<sup>1</sup>Smith & Wilson. *Journal of Immunology*, 1920, V. 6.

<sup>2</sup>Schwartz, *Journal of Urology*, 1920, IV. 4.

complement is titrated. The guinea pig serum is diluted as follows: 1-10, 1-20, 1-30, etc. 0.1 ccs. of each of these dilutions are added to a series of tubes with 0.1 ccs. of antigen. (For general use the mixed stock antigen is diluted 1-10.) The tubes are put in the ice chest for one hour and then into water bath at 37°C for one half hour. Sensitized sheep cells (a 3% suspension of the latter) are added, 0.1 ccs. in each tube. The tubes are replaced in the water bath for fifteen minutes. The lowest dilution of complement producing haemolysis is called the minimum haemolytic dose.

In the tests proper the inactivated serum from the patient is diluted. Four tubes are used and the first three contain 0.1 ccs. of a 1-20 dilution and the fourth 0.1 ccs. of a 1-5 dilution. 0.1 ccs. of the diluted antigen are added to the first three tubes. The amount of complement used varies with different tubes. Thomson calls for two and one half minimum haemolytic doses in the first and fourth tubes, three doses in the second, three and a half in the third. We found that this gave very weak results, and that even good known positives had a tendency to show considerable haemolysis. We, therefore, reduced the complement, using two, two and a half and three minimum haemolytic doses. We did not find a corresponding fixation with negative sera. After the complement has been added the tubes are put into the refrigerator where they remain overnight. In the morning the sensitized sheep cells 0.1 ccs. to each tube—are added and the tubes incubated in the water bath for fifteen minutes.

Even with the reduced complement we continued to obtain low results. It was, therefore, decided to run with the Thomson tests a series following a different method. The main difference was to be a variation in the amount of patient's serum with the complement remaining constant. This is the method adopted in the Wassermann tests in our laboratory.

The details of the test which, to distinguish from Thomson's I shall designate as X, are briefly as follows: The first three tubes of the test contain serum diluted 1-20 in the amounts 0.2, 0.1, and 0.05 ccs. respectively. The control contains 0.1 ccs. of a 1-5 dilution and is, therefore, twice as concentrated as the first tube. Two units of complement as titrated are used in all the tubes. Otherwise the test is identical with Thomson's. The advantage of this method is that fixation is increased and that more strongly positive results are obtained. With such a delicate test this seems desirable. The disadvantage, of course, is that one is apt to get too many positives, *i.e.*, false positives. Accordingly, as a check, a number of known negative cases were examined. Specimens which had been used for routine Wassermann tests at the Toronto General Hospital were used. They included a large number of surgical



cases, a smaller number of medical and a few obstetrical cases. Of 103 cases 94 gave clear cut negatives. Five gave weakly positive results and could not be repeated owing to lack of serum. One obstetrical case gave a positive and a repeat on a specimen taken a week later was negative. Three gave positive results and examination into the histories of the cases showed a record of old infection.

Results from method X were never reported unless those from Thomson's method agreed fairly closely. When there was a disagreement repeats were always made. In making out the reports on the clinical histories and serological tests the latter are spoken of as one test. It should be understood that they are duplicate results.

In making out the report of cases examined in connection with serological findings all cases of gonorrhoea have been divided into four classes as follows:

1. Acute cases with positive smears.
2. Chronic cases with positive smears.
3. Chronic cases with negative smears.
4. Cures.

Besides this classification there are two other groups into which some of our tests must go. (1) The control group of negatives mentioned above, and (2) specimens sent in from hospitals and labelled "routine."

Out of three hundred and fifty tests one hundred and three were the control negatives. This leaves a balance of two hundred and forty-seven which go in one of the four groups of gonorrhoea mentioned above or in the routine group. Of these only one hundred and thirty gave sufficient clinical history to classify them in any of the gonorrhoea groups. A table has been made out showing the clinical findings of these cases as compared with the serological results.

As might be expected, groups three and four are much larger than the other two; group four is largest of all. Private physicians are naturally not so anxious to have serological tests on the cases with positive smears as on those that are clearing or have cleared. In hospital clinics the number of fresh cases as compared with those of long standing is very small.

In class 1, *i.e.*, acute cases with positive smears, we have only eight specimens. Six of these gave a positive serological test. The other two were cases of only four days' duration when a positive serological finding would scarcely be expected.

In class 2, *i.e.*, chronic cases with positive smears of sixteen cases fifteen were positive serologically.

In class 3, *i.e.*, chronic cases with negative smears, but a few other signs remaining, twenty-eight were positive and six negative.

Class 4 includes all clinical cures. There were seventy-two of these

and sixty gave negative results. Of the twelve that were positive three were repeated after two weeks and were negative. The results lead one to hope that if repeats had been possible on more cases the agreement would have been higher. Although one cannot draw conclusions from such a small number there is at least the hope that this group will yield satisfying results.

There have not been many cases on which we have done a series of tests, but I should like to give the results on the few that have been done. One case that gave a positive result when clinically in class 2 gave a negative result on a specimen taken when the patient was pronounced cured. Five cases in group 3, with positive serological findings, repeated when cured gave negative results. Four other cases that had been in group III gave a weakly positive result when considered in group IV by the clinician. One case, that of G.C. arthritis, gave strongly positive tests when the patient's condition was worst. Recently his arthritis has almost entirely disappeared. We have not yet obtained a negative serological test from him, but the recent tests have been much less fixed, and the last test was only weakly positive.

In view of the fact that such a small number of cases have been done and that it has been impossible to do a series of tests on more than a few cases, the results obtained as a piece of research are rather encouraging.

| Source | Group I* |   | Group II |   | Group III |   | Group IV† |    |
|--------|----------|---|----------|---|-----------|---|-----------|----|
|        | +        | - | +        | - | +         | - | -         | +  |
| A      | 2        | 1 | 11       | 1 | 5         | 1 | 21        | 3  |
| B      | 2        | 1 | 0        | 0 | 10        | 3 | 19        | 4  |
| C      | 1        | 0 | 4        | 0 | 13        | 2 | 11        | 2  |
| D      | 1        | 0 | 0        | 0 | 0         | 0 | 9         | 3  |
|        | <hr/>    |   | <hr/>    |   | <hr/>     |   | <hr/>     |    |
|        | 6        | 2 | 15       | 1 | 28        | 6 | 60        | 12 |

#### SUMMARY

| Source | Group I |   | Group II |   | Group III |   | Group IV |    | Routine |    |
|--------|---------|---|----------|---|-----------|---|----------|----|---------|----|
|        | +       | - | +        | - | +         | - | -        | +  | +       | -  |
| A      | 2       | 1 | 11       | 1 | 5         | 1 | 21       | 3  | 0       | 9  |
| B      | 2       | 1 | 0        | 0 | 10        | 3 | 19       | 4  | 0       | 2  |
| C      | 1       | 0 | 4        | 0 | 13        | 2 | 11       | 2  | 1       | 8  |
| D      | 1       | 0 | 0        | 0 | 0         | 0 | 9        | 3  | 0       | 1  |
|        | <hr/>   |   | <hr/>    |   | <hr/>     |   | <hr/>    |    | <hr/>   |    |
|        | 6       | 2 | 15       | 1 | 28        | 6 | 60       | 12 | 1       | 20 |

\*Both negative cases were obtained from patients with an infection of only four days' duration.

†Most of the positives gave only a weak reaction. Two results on later specimens were negative. Two others were in a series and gave weaker results than previously.



To say, however, that the complement fixation test as described above is a wise one to adopt as a routine laboratory test is a statement that is open to much question.

A satisfactory laboratory test is one which will give good results within the range of experimental error. In using amounts as small as those called for in the complement fixation tests, results are practically certain to be affected by laboratory technique. Let us take the antigen for example. Each day a test was made increasing and decreasing the antigen and putting with known positives and negatives. It was usually found that only one dilution, namely, the one used in the test proper, could be relied on to give fixation with positive sera and haemolysis with negative sera. Therefore, although the tests were made with utmost care, and while the duplication of tests avoided many errors, one does not feel over confident that such a fine test will be reliable except when used with great caution.

The complement was probably the other most important source of error. Up to May 1st we had made tests on twenty-five days, that is, we had put through twenty-five different series. Of the twenty-five the whole work of three days had to be repeated. One other series was repeated twice, and another three times before satisfactory results were obtained. In addition to the repetition of the whole series, on thirteen other days individual tests varying in number from one to five were repeated. Considering the fact that the tests were always done in duplicate the source of error either from technique or from the haemolytic system seems to be high. The complement seems to be of great importance in this regard. It is much more difficult to read the complement titration for gonococcus complement fixation tests than for Wassermann tests. This is particularly true when the complement seems low and a correspondingly large amount is used. If the first clear tube in such a case is taken as the minimum haemolytic dose, results will tend to make all the sera negative, and if one uses less than the titre there is a very narrow margin before one is erring on the side of too many positives. Because of some such difficulty it has been necessary to repeat so much of the work.

It would seem, therefore, that while the results have been sufficiently encouraging to warrant the hope that a good test will be evolved, at the present time the method as described is not sufficiently valuable to advocate its general adoption in public health laboratories.

I should like to express my indebtedness to the physicians of the city who have supplied me with specimens from patients at the hospitals, clinics and from those in their own private practice; and to Miss Dorothy McCullough who has worked with me and has been of invaluable assistance in all the serological experiments.

# Child Welfare in British Columbia

Record of Proceedings of the Conference of Committees on Public Health and Child Welfare and the Provincial Board of Health of British Columbia.

A DOMINION Child Welfare Council was formed by the Dominion Department of Health on October 19th, 1920, and the Provincial Departments, following this idea and in order to co-ordinate the work, are each forming corresponding Provincial Councils.

Recognizing that the success of the Provincial Child Welfare movement in rural British Columbia depends almost entirely upon the influence of the Women's Institutes, and in appreciation of the assistance already rendered by individual Institutes, the Board of Health issued invitations on February 21st to the members of the Public Health and Child Welfare Committees, appointed at the recent conference to consult with the Provincial Board as to what particular phase of this work could be recommended to the Institutes, and also the most expedient means of carrying out a definitive Provincial policy.

The conference met on March 11th.

The plan of work and general policy of the National Council was then outlined.

In carrying out this policy the idea is not to form any new organization but to correlate and encourage the present efforts of existing organizations interested in any phase of Public Health and Child Welfare. For this purpose voluntary organizations are acting as educational agencies to show the need that exists and to suggest the most practical remedy. Foremost among these organizations in this respect are the Women's Institutes, whose motto is, "For Home and Country" and object, "to improve conditions of rural life" by the study of "Public Health and Child Welfare." It is with this "object" in view that the members of the Public Health and Child Welfare committees had been called in conference that day.

The plan of work was then, after very thorough discussion, agreed upon.

A "Registry for Expectant Mothers" would mean obtaining the names of expectant mothers and having them fill out an application form and forward it to the Provincial Board of Health in order to receive advice periodically. Various means of finding the names of these and of the mothers of pre-school children were considered. It was unanimously agreed that the teacher, doctor, but more especially the school nurse, would be the sources from which to receive such information.



The graded diet folders issued by the Child Hygiene Section of the Canadian Public Health Association next came under consideration; it was stated by Dr. Young that these could be had upon request, it might be that the Institutes could act as distributing centres for them. From the diet question the discussion turned to the subject of home nursing, and the meeting considered that home nursing demonstrations would be very acceptable to most of the Institutes. After a great deal of discussion the general opinion seemed to be that a Public Health Nurse would be the best qualified to give such demonstrations. This in turn led up to the all important matter of financial support. The plan as outlined in the folder, "How to Organize a Public Health Committee" was reviewed together with the assistance rendered by the Department of Education to school districts employing school nurses and dental surgeons. The problem of suitable living arrangements for these nurses was one which could not always be met satisfactorily in many communities. In one district notably Waldo, the plan which so far has met with success is to provide a joint home for the nurse and teachers.

As regards the health of the school children, the "irreducible minimum" as outlined in the suggested working plan, was discussed clause by clause and the meaning of "Local Education Authority" was explained as the "local school board." The question of providing dental treatment was discussed and although a plan applicable to all districts was not found, it was pointed out that the duties of the school nurse are to follow up the defective children and recommend methods by which operative and dental treatment can be supplied.

In the discussion on the physical condition of the Provincial public schools all agreed that a great need for "daily organized physical exercise of an appropriate character" existed in the schools. Instances were cited where games, such as tennis, football, etc., had been provided by the Institutes. Altogether the general plan was approved.

The next subject receiving attention was the method of working out the details of this plan.

The jacketed stove was described in detail. Such a stove is surrounded by a metal jacket nine inches from the floor with a shaft leading directly from the outside, through which a constant current of fresh air enters, is warmed and rises into the room.

The necessity of having teachers trained to teach health in the schools came under discussion, and the idea was heartily approved.

In order to bring home the true conditions of health, both in children and adults, the plan which has met with such success in other countries, of having health exhibits at fairs, conventions and public gatherings, was considered and approved.

Medical Inspection of School Children was carefully explained by

Dr. Young. British Columbia is the only Province in the Dominion which has compulsory medical inspection of school children. While results are not all they might be, still there is a steady improvement, more and more parents are following advice given by medical examiner. In some instances the medical inspection has been perfunctory; here is where the Institutes can be of immense assistance. If the Institutes would make it a point to have all mothers attend the inspection, the inspection would not only be carried out carefully, but the mother would act upon advice given.

The next topic for careful consideration was the Provincial Child Welfare Council. Dr. Young explained that the idea which it was hoped the Institutes would find practical to carry out is for each Institute to either take the lead or to assist in forming a Child Welfare Committee or Council to carry out the work as outlined by the Federal Department. The Committee of each Institute would form a local council, each of these would appoint a representative, and these representatives could hold conventions or not as deemed advisable. The representatives in turn would, by correspondence or in conference assembled, elect a representative to the Provincial Council. Each of the four districts would thus be represented on the Provincial Child Welfare Council, and the Institutes by this means would become an integral part of the Provincial Child Welfare movement.

The following resolutions were presented by the Resolutions Committee, discussed and adopted:

WHEREAS the suggested working plan for Child Welfare work put before this Committee meets with approval, it is resolved that the plan submitted be accepted as a basis from which to work, and that a copy of same be forwarded to each Institute.

WHEREAS it has become necessary to educate our people uniformly along lines of Public Health and Child Welfare in order to raise the standard of Public Health,

THEREFORE BE IT RESOLVED that the government be asked to provide a Child Welfare and Public Health Exhibit to be shown at fall fairs and conventions throughout the Province.

WHEREAS there are no facilities for treatment of drug addicts in the Province,

THEREFORE BE IT RESOLVED that this conference go on record as urging the establishing of suitable wards for psychopathic treatment apart from the Provincial hospital at New Westminster. And that these wards may receive other mental cases for observation and treatment.

THAT Women's Institutes be made agents for district publicity in Child Welfare work.



WHEREAS the teaching of health in the schools is not carried out in accordance with advanced ideas of health,

THEREFORE BE IT RESOLVED that the Department of Education be asked to appoint a teacher of health for the Normal schools who will be a graduate nurse with university qualifications in Public Health work.

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# Mothers! Breast Feeding of Infants Is Best

BY J. J. MIDDLETON, M.B., D.P.H.

**B**REAST feeding is nature's way of bringing up babies. It is unquestionably the best method, no system of artificial feeding however scientific, being able to compare with it. The great preponderance of deaths among artificially-fed children proves conclusively that a baby's chance of surviving during the first critical year of life is immeasurably increased if it is fed on mother's milk.

There is no feature of Child Welfare work that needs more emphasis than this question of infant feeding. Every mother in the Province should become an active apostle both by example and advice of this most important stepping-stone to a healthier childhood.

## NURSE THE BABY

*Instances in which mothers cannot or should not nurse their babies are few and far between.*

Scientific care of the mother, and practical help supplied by competent advisers will in almost every case remove any objection to feeding the child at the breast. In all efforts towards Child Welfare, no great hopes can be held out for improved standards of health for the coming generation if the question of infant feeding is not given a foremost place in the minds and hearts of all.

## ARTIFICIAL FEEDING

For the very few mothers who through necessity must abandon nature's way of infant feeding, and resort to artificial foods, some important points must be clearly pointed out:—

Modified cow's milk is the most satisfactory substitute for mother's milk.

A bottle-fed baby should be under the supervision of a physician.

At nine months of age a baby should be getting approximately three parts milk and one part water. The milk may be increased gradually until at 12 months the baby will be getting whole milk.

## MILK MUST BE PURE

All milk delivered to your door should be in bottles and should come from healthy, disease-free cows.

If the milkman delivers your milk before you are up in the morning



place a covered box outside your door for him to put the milk bottles in. This will keep the milk from the glare of the sun, and from flies, cats and dogs. In winter a little sawdust in the bottom and about the sides of the box will prevent the milk from freezing.

### KEEP THE MILK CLEAN

If it is impossible for you to get bottled milk get the best you can from a milkman whom you know to be clean.

Keep the milk in the bottle until needed for use. When the cap is removed wash off the mouth of the bottle before pouring out milk, after which the cap should not be replaced, but an inverted cap or glass placed over the bottle.

### MILK SHOULD BE PASTEURIZED

Raw milk may carry germs of tuberculosis, diphtheria, scarlet fever, or other communicable diseases. Danger can be prevented by proper pasteurization of the milk. Pasteurization means heating the milk to about 150 degrees F. for 30 minutes and then rapidly cooling it. Milk for the baby should always be pasteurized in the feeding bottles.

### HOW TO PASTEURIZE

It may be done as follows: The feedings for the next twenty-four hours should be mixed in a large pitcher, according to physician's directions, and poured into the clean, feeding bottles, which should then be stopped with clean, non-absorbent cotton. It is then ready for pasteurization. Take a wire basket or bottle rack that will hold all the nursing bottles, and place this in a vessel of cold water filled to a point a little above the level of the milk. Heat the water and allow it to boil for five minutes. Then run cold water into the vessel until the milk is cooled to the temperature of the running water. The milk should then be kept on ice until used.

### KEEP MILK IN ICE BOX

If you have an ice-box put the milk in it as soon as possible after delivery. A very good ice-box can be made as follows: Get a box 18 inches square from the grocer and put 3 inches of sawdust in it, place upon this two pails, one larger than the other, the smaller one inside the larger. Fill the box around the outer pail with sawdust. Into the inner pail put your bottles of milk, surrounding them with cracked ice. Then cover the inner pail with a thin cover and the box with its own cover, on the surface of which you have nailed about ten newspapers.

## AVOID PREPARED FOOD AND CONDENSED MILK

Where fresh milk cannot be obtained milk powder—dry milk—is the best form of canned milk to use.

*Baby foods and condensed milk are not satisfactory substitutes for good cow's milk. They may make the baby fat, but will not promote proper growth.*

Babies fed on such foods usually have a low resistance to disease.

Hold the baby in your arms and hold the bottle while feeding, and do not allow the baby to drink from the bottle longer than fifteen or twenty minutes.

If the baby does not want the whole feeding do not urge him to take it, and do not save it for the next feeding—throw it out, rinse the bottle and fill it with cold water.

## STOP FEEDS IF DIARRHOEA OCCURS

If the baby has diarrhoea stop all feedings, give plenty of boiled, lukewarm water, and send for a physician.

## MOTHERS SHOULD CO-OPERATE

Last but not least, develop the community spirit, the spirit of co-operation in infant and child welfare. Knowing how to feed and care for your own children lend a helping hand to those less fortunate people in your neighbourhood who need your help and advice. Also assist by every means in your power all organized efforts that may be put forth in your home town or district to reduce infant mortality and to correct defects of childhood.

## A HEALTHIER RACE OF PEOPLE

By so doing you will have the gratification of helping in the great work of improving health standards and bringing about a healthier and happier plane of citizenship for the generations to come.

The above article is being issued in pamphlet form by the Provincial Board of Health of Ontario. Copies for general distribution can be obtained by applying to the Chief Medical Officer of Health, Parliament Buildings, Toronto.

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# Social Background

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## Toronto Neighbourhood Workers' Association

### EMERGENCY UNEMPLOYMENT WORK

WHEN unemployment became acute in the city it was felt that it would be more satisfactory if the secretaries were in district offices where they could work in closer co-operation with the nurses, dealing with the problems that arose in connection with other needs than those of food and coal in the families to which the nurses were giving relief.

### NUMBER AND TYPE OF FAMILIES

1526 families, presenting 1903 specific problems, were referred to the secretaries up till May 1st. Rent was the cause of trouble in more than 50% of the cases. About 10% of the total applications were unnecessary being from people who were more or less taking advantage of the situation, while another 15% were able to find their own solution through some unexpected windfall, or by carrying out the advice of the secretary before the secretary had to take action herself. Loans were given as a last resort, when there were no other sources of immediate help. One-third of the families had loans. One might note that the working-man landlord was more sympathetic than the well-to-do owner. The families as a rule, represented a good independent working group. Less than half (652) were known to the Exchange, while 42 others were known to have a record not registered and from the majority of the registrations one would not infer previous dependency. Only about 150 families present problems that will necessitate continued work by the Neighbourhood Workers Association after the unemployment emergency has ceased, and a few others are the responsibility of agencies to which they were immediately referred.

### EMPLOYMENT OF WORKERS

At least 25% of the men were laid off from construction work, and other seasonal trades. When regular seasonal workers were questioned as to why they could not maintain themselves as in other winters they stated the rainy fall caused short time and lessened earnings; that they usually obtained odd jobs or worked in factories during the winter; that their friends were out of work and could not lend them money to tide them over.

A little less than half the men could be classed as even semi-skilled,

and many men with trades had not been employed at them for months and had been working as labourers, with lower wages and irregular work.

Only one-third of the men were known to be working at work which might be expected to be regular by the end of April. The average labourer had been six weeks out of work when he applied to the Neighbourhood Workers, while the average for the semi-skilled was two or three weeks longer. A few of the men tried to obtain help under false pretences, when they were working. They over-reached themselves when they applied for help with rent, and the secretary asked the employer for the man's record, and if he could soon be re-employed.

There were also a few instances of employers taking advantage of the situation. One firm had a janitor for a year and paid him \$19 a week, on which he could *just* keep his family. In February they let him go and engaged an old man at \$13 a week. On inquiry they said the first man was a good worker and had wanted to stay, but they knew he could not keep his family on the lower wage and as they could get cheaper help they did not feel justified in employing him, even though he wished to stay at the reduced wage. While the majority of the families needed help for debts—whether rent, insurance, light, or other payments, and clothing, there were many varied services rendered.

Sometimes the deterioration due to unemployment led to marital troubles. In some families the wife went to work and the husband looked for company elsewhere. The secretary had to adjust difficulties—sometimes moving the family, sometimes getting work, though rarely was the last ever possible, or somehow temporarily at least patching up a truce. When time permitted the opportunity was taken to fill some of the many social needs that are found in any group of families.

#### BOARD OF TRADE

As it was obvious by the end of December that there would be great need for help with rents, the Board of Trade instituted a loan fund, which was of the greatest assistance. The Neighbourhood Workers Association acted in co-operation with the Board of Trade, investigating and recommending families for loans. After the emergency work was over, Mr. Tolchard, Secretary of the Board of Trade, expressed the appreciation of the Board for the work done in part as follows:

"I am also instructed to convey to you, and through you to the workers associated with you in the Neighbourhood Workers Association, the sincere thanks and appreciation of the Board of Trade Emergency Loan Fund Committee for the very splendid service which has been rendered during the past winter in investigating and reporting upon applications for rental loans. The Committee has at all times been well



pleased with the complete reports which have been presented and the thoroughness of the work of your Association."

While there is no question but that the fact that there was some means of dealing with rents, and the other problems, prevented a great deal of suffering, it was in many ways disheartening work. The majority of the men wanted work, not help. At first they were optimistic, but as week after week their searching and tramping brought in only enough to pay part of possibly a gas bill, they became despondent and sometimes slouchy in appearance. More genuine thanks was given for a job secured in most cases than for material help.

### REPORT OF WORK DONE IN CONNECTION WITH EMERGENCY UNEMPLOYMENT

January 1st to May 1st, 1921

#### *Main causes of financial stringency in family:*

|  |              |
|--|--------------|
| Cases where problem was caused by unemployment. Family were normally financially independent .....                               | 1,269        |
| Cases where problem was due to a social disability in addition to unemployment (not including temporary illness) .....           | 144          |
| Cases where there was underemployment and not sufficient income to keep family independent .....                                 | 43           |
| Cases where present financial situation was largely, or wholly, due to expense of recent illness, followed by unemployment ..... | 70           |
| <b>Total number of families .....</b>  | <b>1,526</b> |

#### *Specific Problems Presented:*

|   |              |
|---|--------------|
| Clothing .....  | 344          |
| Gas, Hydro, Water Bills .....   | 214          |
| Rent .....  | 1,104        |
| Other debts, medical or household supplies, transportation, special investigation to help decide eligibility for relief and miscellaneous ..... | 241          |
|   | <b>1,903</b> |

#### *Disposition of Problems Presented:*

Where several problems presented by one family were solved in the same manner, the solution is only included once. Similarly one problem might require a combination of disposition.

|   |     |
|---|-----|
| 1. Unnecessary applications. Family was quite capable of meeting the problem and it was left entirely with them ..... | 183 |
| 2. Advice and direction given which assisted family to meet the problem themselves .....                              | 103 |

|   |       |
|---|-------|
| 3. Referred to another agency.....  | 146   |
| 4. Legal aid obtained.....  | 13    |
| 5. Friendly visitor obtained; church connection or family relationship strengthened.....                            | 43    |
| 6. Investigation for Public Health Nurse involving more than ordinary consultation.....                             | 38    |
| 7. Adjustment made with creditor.....   | 107   |
| 8. Creditor staved off until:   |       |
| (1) Family obtained work; or aid from friends....   | 65    |
| (2) Problem had ultimately to be handled, but on a smaller scale.....   | 9     |
| (3) Still pending.....  | 15    |
|   | — 89  |
| 9. Work obtained:   |       |
| (1) Temporary work.....   | 40    |
| (2) Permanent work.....   | 21    |
| (3) Work was refused.....   | 29    |
| (4) Man secured other work at the same time and so did not take job.....  | 6     |
|   | — 96  |
| 10. Material relief secured other than loans:   |       |
| (1) —Through individuals.....   | 100   |
| Through churches.....   | 83    |
| Through organizations.....  | 84    |
| Through relatives.....  | 1     |
|   | — 268 |
| (2) Supplementary—Through organizations. ....   | 10    |
| Food Through churches.....  | 1     |
|   | — 11  |
| (3) Cash or other—Through individuals.....  | 12    |
| Relief Through relatives.....   | 10    |
| Through churches.....   | 28    |
| Through organizations.....  | 63    |
|   | — 113 |
| Total material relief secured.....  | 392   |
| 11. Board of Trade loans:   |       |
| (1) Families to which loans were given (56 of these cases had repeated loans, not always from the same source)..... | 444   |
| (2) Man found solution before cheque came.....  | 26    |
| (3) Refused.....  | 9     |
|   | — 479 |



|   |       |
|---|-------|
| 12. N.W.A. gave loan (20 of these cases had repeated loans, not always from the same source)..... | 53    |
| 13. Miscellaneous services.....   | 44    |
| 14. Man was told to make a further effort with the landlord, and did not return.....              | 55    |
| 15. Man moved, or working, or found a solution before any action was taken.....                   | 78    |
| 16. Man refused information required or co-operation.....   | 51    |
| Total disposition of problems.....  | 1,970 |

### COUNTY WORK

Just before Christmas the Neighbourhood Workers Association received numerous appeals from unemployed men living in the county. Many of them were city men who, not able to pay city rents, moved out but still worked in the city and, like many others, were laid off. By the time the City Relief was organized they were at the end of their resources. They tramped in, as before, to the Employment Bureau and discovered that relief was only for city men. They were referred to the Neighbourhood Workers Association. The Secretary, if it was necessary, gave an emergency order; later she tried to reach some minister or prominent citizen near the man's home and ask him to visit and help the family if it were wise. Some of the township officials were willing to help, but until elections were over, they did not feel able to spend money on much relief. Christmas week the men came into the office, many of them white and overstrung, heartsick at the Christmas they saw ahead for the children. As far as possible endeavours were made to see that no family missed Christmas dinner, but the fact that all work had practically to be done by long distance phones, and that even these were scarce in the localities added to the difficulty. Altogether 201 of these men came to the office before the middle of January, when the townships organized their relief on a broader basis and undertook full responsibility and made unnecessary the weary round that many of the men made in an effort to find help.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF MAY, 1921

#### COMPARATIVE TABLE

| Diseases                       | May, 1921 |        | May, 1920 |        |
|--------------------------------|-----------|--------|-----------|--------|
|                                | Cases     | Deaths | Cases     | Deaths |
| Small-pox.....                 | 533       | 1      | 290       | 0      |
| Scarlet Fever .....            | 363       | 11     | 383       | 10     |
| Diphtheria.....                | 434       | 32     | 378       | 46     |
| Measles.....                   | 516       | 8      | 2,245     | 45     |
| Whooping Cough.....            | 228       | 15     | 99        | 12     |
| Typhoid.....                   | 38        | 8      | 41        | 12     |
| Tuberculosis .....             | 224       | 130    | 237       | 127    |
| Infantile Paralysis.....       | 3         | 2      | 1         | 1      |
| Cerebro-Spinal Meningitis..... | 10        | 7      | 8         | 7      |
| Influenza and Pneumonia.....   | 31        | 19     | 61        | 53     |
| Primary Pneumonia .....        |           | 181    | ...       | 292    |
|                                | 2,403     | 414    | 3,743     | 606    |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH

#### COMPARATIVE STATEMENT

|                 | May, 1921 | May, 1920 |
|-----------------|-----------|-----------|
|                 | Cases     | Cases     |
| Syphilis.....   | 261       | 81        |
| Gonorrhoea..... | 252       | 107       |
| Chancroid.....  | 6         | 3         |
|                 | 519       | 191       |



SMALL-POX CASES REPORTED BY LOCAL BOARDS OF  
HEALTH FOR THE MONTH OF MAY, 1921

| County              | Municipality                          | Cases | Dths. | County            | Municipality        | Cases | Dths. |
|---------------------|---------------------------------------|-------|-------|-------------------|---------------------|-------|-------|
| Algoma—             | Sault Ste. Marie (5 months Jany.-May) | 164   | ..    | Muskoka—          | Morrison.....       | 5     | ..    |
|                     | Massey Station.....                   | 1     | ..    | Norfolk—          | Simcoe.....         | 3     | ..    |
| Brant—              | Brantford.....                        | 11    | ..    |                   | S. Walsingham.....  | 3     | ..    |
|                     | Oakland.....                          | 1     | ..    |                   | Charlotteville..... | 3     | ..    |
|                     | S. Dumfries.....                      | 3     | ..    | Northd. & Durham— |                     |       |       |
| Carleton—           | Ottawa.....                           | 104   | 1     |                   | Bowmanville.....    | 14    | ..    |
| Dufferin—           | E. Garafraxa.....                     | 3     | ..    |                   | Cartwright.....     | 1     | ..    |
| Essex—              | Essex Border.....                     | 3     | ..    | Ontario—          | Rama.....           | 8     | ..    |
|                     | Amherstburg.....                      | 4     | ..    |                   | Beaverton.....      | 1     | ..    |
| Frontenac—          | Kingston.....                         | 1     | ..    | Oxford—           | S. Norwich.....     | 22    | ..    |
|                     | Kingston Tp.....                      | 3     | ..    | Parry Sound—      | Parry Sound..       | 4     | ..    |
| Grey—               | Bentinck.....                         | 7     | ..    |                   | Byng Inlet.....     | 2     | ..    |
|                     | Sydenham.....                         | 1     | ..    | Peel—             | Bolton.....         | 3     | ..    |
|                     | Durham.....                           | 1     | ..    | Perth—            | Logan.....          | 2     | ..    |
|                     | Hanover.....                          | 1     | ..    | Peterboro—        | Peterboro.....      | 4     | ..    |
|                     | Sarawak.....                          | 2     | ..    | Simcoe—           | Alliston.....       | 1     | ..    |
|                     | Sullivan.....                         | 1     | ..    |                   | Orillia.....        | 3     | ..    |
| Halton—             | Milton.....                           | 2     | ..    |                   | Adjala.....         | 1     | ..    |
|                     | Naussagawaya.....                     | 1     | ..    |                   | Orillia Tp.....     | 5     | ..    |
| Hastings—           | Belleville.....                       | 6     | ..    | Sudbury—          | Foleyet.....        | 1     | ..    |
|                     | Deseronto.....                        | 1     | ..    | Thunder Bay—      | Port Arthur..       | 1     | ..    |
| Lambton—            | Sarnia.....                           | 1     | ..    | Temiskaming—      | Haileybury..        | 5     | ..    |
|                     | Brooke.....                           | 8     | ..    |                   | Bucke.....          | 4     | ..    |
| Lanark—             | Carleton Place.....                   | 2     | ..    | Waterloo—         | Kitchener.....      | 6     | ..    |
|                     | Drummond.....                         | 1     | ..    |                   | Galt.....           | 1     | ..    |
|                     | Dalhousie & N.                        |       |       | Wellington—       | Guelph.....         | 1     | ..    |
|                     | Sherbrooke.....                       | 3     | ..    |                   | Harriston.....      | 2     | ..    |
| Lennox & Addington— |                                       |       |       |                   | Maryborough.....    | 6     | ..    |
|                     | Denbigh A & A....                     | 1     | ..    |                   | Mount Forest.....   | 2     | ..    |
|                     | Richmond.....                         | 10    | ..    | Wentworth—        | Hamilton.....       | 14    | ..    |
|                     | Ernestown.....                        | 2     | ..    |                   | Dundas.....         | 1     | ..    |
| Lincoln—            | St. Catharines.....                   | 1     | ..    |                   | Waterdown.....      | 1     | ..    |
| Middlesex—          | London.....                           | 3     | ..    | York—             | Toronto.....        | 7     | ..    |
|                     | W. Nissouria.....                     | 1     | ..    |                   | Newmarket.....      | 9     | ..    |
|                     | Mosa.....                             | 1     | ..    |                   | King Tp.....        | 1     | ..    |
|                     | Westminster.....                      | 2     | ..    |                   |                     |       |       |
|                     |                                       |       |       |                   |                     | 533   | 1     |

## News Items

Dr. Alan Brown, Director of Child Hygiene in the Department of Public Health, Toronto, was the guest of the Pacific Coast Paediatric Society at its recent meeting in June held in Portland, Oregon. Dr. Brown was elected an Honorary member of the Society. Returning by way of Vancouver he addressed the Vancouver Medical Association in that city.

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Dr. C. J. O. Hastings, Medical Officer of Health, Toronto, has quite recovered from his recent severe illness and has resumed his duties.

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Miss E. Kathleen Russell, Director, Department of Public Health Nursing in the University of Toronto, is spending the summer in Nova Scotia.

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Dr. George D. Porter has resigned as Secretary of the Canadian Association for the Prevention of Tuberculosis and has been appointed Special Lecturer in Health Education in the Department of Hygiene and Preventive Medicine, University of Toronto.

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Dr. Robert E. Wodehouse has resigned as District Officer of Health, No. 2 District, Provincial Board of Health, Ontario, and has been appointed Secretary of the Canadian Association for the Prevention of Tuberculosis in succession to Dr. George D. Porter.

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Dr. J. J. Fraser has been appointed District Officer of Health for District No. 2, Provincial Board of Health, Ontario.

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Dr. Gordon Bates, General Secretary, Canadian National Council for Combating Venereal Diseases, is in England at present.

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Unofficial figures so far available seem to show that the infant mortality rate of the City of Toronto for the first six months of 1921 is the lowest yet recorded.

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Dr. R. D. Defries, General Secretary of the Canadian Public Health Association has resigned and has been succeeded by Dr. R. R. McClenahan, Director of the Division of Venereal Diseases, Provincial Board of Health, Ontario.



Dr. Fred. Adams, Windsor, Treasurer of the Canadian Public Health Association, has resigned and Dr. A. Grant Fleming, Deputy Medical Officer of Health, Toronto, has been elected Treasurer.

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Dr. T. M. Sieniewicz, of Halifax, Nova Scotia, for three and a half years associated with Dr. A. F. Miller in the Tuberculosis Sanatorium at Kentville, has been appointed to the position of Tuberculosis Examiner in the Massachusetts-Halifax Health Commission. Dr. Sieniewicz succeeds Dr. D. A. Craig, the first appointee in this position. All of his time will be given to the public health work of the Commission and to consultation work with physicians of Halifax and Dartmouth.

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An interesting Scrap Book has been prepared by the Child Hygiene Section of the Canadian Public Health Association, 206 Bloor St. W., Toronto, containing samples of the literature used in the Toronto Milk Campaign—including photographs, budget, posters, etc. This will be loaned to any organization interested in a similar campaign, and will be sent, upon request, express collect.

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The American Social Hygiene Association announces that its offices have been changed from 105 West 40th Street to 15th floor, 370 Seventh Avenue, New York City.

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In Saint John, N.B., at the Winter Port a piece of combined Public Health and Canadianization is being carried on. A Red Cross Nurse and many willing helpers minister to the mothers and children as they come off the ships. All are made comfortable between the time of the arrival of the steamer and the start by rail for the final destination. The help does not rest there either, for each mother is given a card for subsequent use if the child should become ill during the first few months in the new home. This card bears a Red Cross, the one sign so many of the women from stricken Europe know and trust. On one side of the card is printed instruction for the mother as to how and where help can be secured by presenting this card to: The City or Town Hall (Health Officer); The Hospital; The Public Health Nurse; The Victorian Order Nurse; The Red Cross Nurse. If further information is wanted the holder of the card is instructed to write to the Health Officer of the Province where she is domiciled or to the Canadian Red Cross Society. On the reverse side of the card is the address necessary

for these letters; one town in each of the nine Provinces of Canada being given: British Columbia, 623 Pender St. W., Vancouver; Alberta, O'Sullivan Block, Calgary; Saskatchewan, 1821 Scarth St., Regina; Manitoba, 315 Portage Avenue, Winnipeg; Ontario, 410 Sherburne St., Toronto; Quebec, 45 Belmont Park, Montreal; New Brunswick, 160 Prince William St., St. John; Nova Scotia, 63 Metropole Building, Halifax; Prince Edward Island, Charlottetown. The only card so far in use is in English. Eventually it will be printed in three languages. It will become then a real help to the distracted mother who has not learned very much English. When she has been made happy by seeing her child restored to health it will be found that an additional incentive has been given to induce her to learn English.

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## Notes on Current Literature

From the Department of Information on Public Health, Canadian  
Red Cross Society

### INTERESTING ARTICLES IN RECENT PERIODICALS

#### *Vitamines and Public Health.*

Dr. Drummond, of the Department of Physiological Chemistry, University of London, England, warns against the commercial exploitation of vitamins. If people would recognize the real situation and eat more fresh vegetables, fruits, eggs and milk, they need not, under ordinary circumstances, purchase expensive, and possibly inefficient, proprietary articles, nor worry about vitamins. Natural sources for these products abound on every hand. ("The American Journal of Public Health," July, 1921.)

#### *Which Way Are We Going in Nursing?*

The education of the nurses of the present and the standards and numbers of nurses of the future are matters of practical concern to all classes in the community. This article discusses the value of short courses in nursing. The author believes that the group reached by these courses should be called "Attendants" and not "Nurses," and that the duties and responsibilities undertaken by these "attendants" should be restricted. ("The Survey," June 18th, 1921.)

#### *Ontario Municipal Health Efforts.*

With comprehension and thoroughness Dr. Robert Wodehouse shows the present health expenditures of municipalities in Ontario and compares these figures with the amounts that should be spent if it were generally realized that public health is a purchasable commodity; and that, within natural limits, every community can determine its own death rate. This article will make illuminating, and in some cases, salutary reading for every one interested in local government. ("Public Health Journal," May, 1921-p. 193.)

#### *The Public Aspect of Tuberculosis.*

Dr. Royer shows how former methods of combating tuberculosis have not yielded the desired results. He outlines methods for preventing the spread of the disease and indicates the roles played in this campaign by proper home care, health centres, clinics and sanatoria. ("The Public Health Journal," May, 1921, p. 213.)

*Community Aspects of the Tuberculosis Problem.*

The Publicity Director of the National Tuberculosis Association reviews the various agencies for the discovery of cases of tuberculosis. ("Public Health Nurse," June, 1921, p. 274.)

*Daylight in the Schoolroom.*

A report on the conservation of vision and the lighting of schoolrooms, emphasizing the most complete utilization of daylight by the correct construction and location of windows and the use of shades and reflectors. ("Journal of American Association, June 18, 1921, p. 1785.)

*The Minister of Health and Housing.*

Extracts from the speeches made by Sir Alfred Mond in the British House of Commons. ("Housing," June, 1921, p. 281.)

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# Notes on the Venereal Disease Problem

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## Public Health Activity and Private Practice in Venereal Disease Control

BY JOHN H. STOKES, M.D., *The Journal of the American Medical Association*, vol. 76, No. 18, April 30, 1921

A GREAT disinterested public spirit is seeking, through public health officers, to wipe out a group of controllable infections—the venereal diseases. A large body of equally well intentioned private agents, in the form of the medical profession, derives its livelihood, at least in part, from the same source. An antagonism between the public activity and private interest, which might so easily develop in such a situation, would be wholly unnecessary and deplorable. The United States Public Health Service and the associated venereal divisions of various state boards of health realized the implications of their entry into this field of medical practice and submitted a declaration of principles and intentions, the summary of which is:

They endorse and urge the continuance of a campaign of public education.

They urge the evaluation of the propaganda thus far carried on in as exact social, psychologic, and medical terms as possible.

They prefer education and persuasion to legal process in regard to law enforcement and regulation.

They ask the intelligent and sympathetic co-operation of the medical profession. This co-operation can best be obtained by the rapid extension of specialized teaching facilities for the medical students; by making available to physicians the latest developments concerning the venereal diseases; and by the development of state diagnostic facilities for the use of practicing physicians.

Having accepted its share of responsibility for developing an appropriate equipment, the Public Health Service and its affiliated state organizations urge physicians at large to move for a general raising of the standard of treatment of the venereal diseases. In the words of the resolution:

This implies that a physician who is unfamiliar with or unprepared to employ modern methods in the management of these diseases should not accept such cases for treatment, but should

refer them to some private or public physician who is properly equipped.

If the medical profession can treat the venereal disease patients adequately, the United States Public Health Service and the state boards of health pledge themselves not to invade the field of private practice in this phase of medical work.

The representatives of the public health service concede and define the value and the basic requirements of training for this work, and recognize as one of the essential requirements the provision of inspiration and incentive to individual development and reward for initiative.

The public health authorities further frankly concede that under existing conditions the Public Health Service cannot hope to offer a career with adequate returns to those who devote themselves exclusively to the work of venereal disease control, and recognize with equal justice the right of the highly trained man to seek in private practice the material return for special training and proficiency which public parsimony now denies him.

So sincere and genuine an effort at co-operation as this declaration represents deserves the warmest response from the medical profession. It should be the privilege of the medical profession to bring its influence to bear to dignify public service in medicine. It is also the duty of the medical profession, and to its own interest, to co-operate in the development of educational and diagnostic facilities and to raise the standard of the treatment accorded the patient with a venereal disease.

The extinction of private practice in venereal disease is not a consummation to be wished, but it will be one to be deserved if the medical profession cannot measure up, by a process of internal organization and adjustment, to the standards of the most altruistic and energetic public agent in the field.

The United States Public Health Service and the state venereal disease bureaus, backed by one of the most powerful public sentiments now concentrated on any health problem, have expressed a desire for co-operation with the medical profession and indicated a way for its achievement.

### **Interim Report of the Neurosyphilis Investigation of the Massachusetts Commission on Mental Diseases**

BY OSCAR RAEDER, M.D., *Bulletin of the Massachusetts Department of  
Mental Diseases*, vol. IV., No. 2, April, 1920.

In order to make early diagnosis of neurosyphilis, the psychopathic department applied the Wassermann test to the spouses, children, and



parents of syphilitics. After diagnosing the cases as positive, neuro-syphilis treatment was instituted. As a systematic basis, a time span of three months during which intensive treatment with arsphenamine and mercury were given, was chosen. In this time it could be determined whether a case will react favourably or otherwise. The author considers the cases as cured when the Wassermanns become negative in the blood and fluid, globulin and albumin practically normal, cells reduced to within 5 and a slight gold reaction in three or more tubes, with partial reduction in the syphilitic zone, provided, of course, the patients have mentally recovered and show no more organic defects than an Argyll Robertson pupil or a pathological knee jerk, for example.

### RESULTS OF TREATMENT

In a comparative study of the laboratory changes in a limited number of clinically improved cases (28) in which the investigators were able to get complete before-and-after tests of sera and spinal fluids, they found the following:

#### IMPROVED CASES

|   |           |
|---|-----------|
| A. Improved as to Wassermann reaction on blood and fluid and gold sol.....      | 9 or 32%  |
| B. Improved as to Wassermann reaction on blood only, additional.....            | 5 or 18%  |
| A. and B. Improved as to Wassermann reaction on blood...                        | 14 or 50% |
| C. Improved as to gold sol only.....  | 3 or 11%  |
| D. Improved as to Wassermann reaction on cerebro-spinal fluid and gold sol..... | 1 or 4%   |
| E. Stationary as to Wasserman reaction on serum and gold sol.....               | 9 or 32%  |
| F. Worse as to Wassermann reaction on serum and fluid and gold sol.....         | 1 or 4%   |

Under A are represented nine cases—seven of these had a positive reaction on serum and spinal fluid and a more or less typical parietic curve; the other two had negative Wassermann reactions on the serum but were otherwise the same. All nine cases showed great improvement after intensive treatment extending over a period of from three months to four years.

Under B there are five additional cases in which the blood serum became negative, the spinal fluid remaining unchanged. Thus including the cases under A and B there were 14 improved cases or 50 per cent. in which the Wassermann reaction of the serum became negative.

In a study of 27 cases, with complete data taken before treatment

and again shortly before death, it is shown that 56 per cent. of the cases were practically unaffected by the treatment.

One case showed evidence of improvement as to Wassermann reaction on fluid and the gold sol, but the Wassermann reaction on the serum remained positive.

Two cases showed improvement in the Wassermann reaction on both serum and fluid; in one case two doubtfuls changed to two negatives; and others, both positive at first, changed to both negative with a slight improvement on the serum only.

Distinct improvement in the gold sol curve without reaction in the Wassermann test occurred in four cases or 15 per cent. One of these cases showed a practically negative gold sol with a terminal marked tabetic involvement during the last four months.

Fifteen cases or 56 per cent. showed no changes in the serology or fluid findings from the time of the first examination until death.

One case in which the Wassermann reaction was first—on the blood all the other reactions positive for paresis grew worse until after treatment and at remission the blood serum also became straight positive before death.

According to this analysis of fatal cases in which minute care was taken to observe all the laboratory and clinical changes, including also, besides the Wassermann tests and gold sol reaction, the cell count, albumin and globulin estimation, it was found that over 56 per cent. of the cases in which the diagnosis of neurosyphilis is crystal clear both from a clinical and laboratory standpoint may be expected to end unfavourably. With exceptions, little or nothing can help these fully developed "committed type" cases.

### CONCLUSIONS

In 428 cases of neurosyphilis treated during a period of four years 129 cases, or practically 30 per cent., showed definite benefit; 125 cases are under treatment at hospitals, of which a certain percentage can be expected to show similar improvement. Among 93 cases that have drifted away, another definite proportion, probably a larger number comparatively, can be presumed to have benefited from treatment.

There are two definite groups of cases of neurosyphilis: the early or the psychopathic hospital group and the advanced committable or custodial group. The early case is not met in insane hospitals except in such as conduct out-patients departments. These cases also frequently first come to professional attention through the field of general or "internal" medicine.

The relatives of syphilitics and neurosyphilitics form a most im-



portant group in which not only syphilis but the earliest degrees of neurosyphilis in the presymptomatic stages are brought to light by lumbar puncture and sero-analysis. It is in these types that by far the most important benefit can be expected.

Early diagnosis, preferably before pronounced mental symptoms have appeared, gives the greatest promise of successful results. For it seems that for some reason the curative agent is less able or practically unable to influence certain bacterial toxins after they have had time to combine with the neuroplasm. Another instance of this phenomenon is shown in the case of the tetanus toxin.

Apparently advanced neurosyphilis is not a contra-indication to treatment—there is a distinct, though not large, percentage of such cases that amply gratify the efforts of intensive attack.

In early and typical cases the most exhaustive serological and spinal fluid examinations are the best guides to the diagnosis. The provocative method should not be overlooked.

Intensive and prolonged treatment to the point of saturation with the combined force of the three specifics—arsenic, mercury and potassium iodide. Arsphenamine has been preferred to neoarsphenamine as more lasting in its effects.

The *therapia praesens* of neurosyphilis is but a transition state in rational syphilotherapy. Medical science had discovered several good clues which must be followed up, and others ferreted out and run down, before the solution of the problem is complete. Indeed, the successful treatment of paresis and tabes as the crippling cradiopathos, etc., may ultimately be realized in the field of preventive medicine. With chemotherapy, however, Ehrlich had doubtless found the most vulnerable approach to the treponemiatic diseases, but further research is necessary and other combinations must be found before the life of this anthropophagous pest is successfully snuffed out.

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## Report of the Director of Medical School Inspection on the Teaching of Hygiene in Public Schools of Toronto.

THE question of the place to be allotted the teaching of good health, Personal Hygiene, or whatever it may be called in the present and future curriculum of the Public Schools of Toronto, is a vital one. That it has not in the past been sufficiently emphasized, especially in the Junior grades, no one will gainsay, and the responsibility for this is of no real moment, but that it must be permitted to assume a position commensurate with its importance in the immediate future, is a responsibility which I feel this Department must of necessity assume.

That the whole subject should be changed from one undertaught by a teaching staff, handicapped by a lack of sufficient knowledge of the subject, to one of vital importance to appreciative staff and students, "Our plea is for a broader conception of the functions and scope of educational hygiene. The usual attention given to heating, lighting, ventilation and gross physical defectiveness is but the merest beginning. The school, instead of causing sickness and deformity, must be made to preserve the child from all kinds of morbidity, repair his existent deformities, combat his unfavourable heredity and the bad conditions of his environment; in a word, fortify his constitution and render him physically and mentally fit for the struggles of life. The greatest problem of conservation relates not to forests and mines, but to national vitality, and to conserve the latter we must begin by conserving the child." "No other agency compares with the school in the opportunities offered for contributing to the health of the succeeding generation. We cannot legislate desirable habits of living into men and women, but we may be able to mold, after our ideals, the hygienic habits of the child."

With this end in view let us review the subject of Health Teaching in Toronto Schools.

The present method of handling this subject varies in every school. Many principals and teachers appreciating its importance have attempted to find room for it in an already overcrowded curriculum; others have appreciated, but procrastinated the evil day. While others have felt the need of a guiding hand and are only waiting for such.

The subject as taught in the first grades, Junior and Senior First, is vague, as is the time allotted to it, varying with the individual principal and teacher.



Similar conditions exist in the Second grades, although the subjects mentioned in the Manual might be made interesting to a child of ten, if the teacher had the time and a more comprehensive grasp of her subject.

An effort is made in the Third and Fourth grades in practically all centres, but the subject of ventilation and heating, mixed up with the number of bones in the human anatomy, with an occasional dissertation on the dire evils following the use of alcohol and tobacco, make a hodge-podge that it would be impossible for any child to assimilate.

The solution seems to be this:

First we must get firmly fixed in the mind of all educational authorities that this subject is of paramount importance, and that it should have a very definite place in the daily academic programme. Secondly, we must of necessity impress on the Provincial Department of Education the need for a better instruction in this subject at the Educational centres (Normal and Model schools), and third, that we endeavour to so place our subject before the children preferably through the media of the teacher herself, that it can be of real value, and if we have accomplished the first two, the last is relatively easy.

In the Junior Grade, any of the day's many happenings can be used to advantage. The child who cannot see the blackboard, the one with dirty hands, the finding of apple or candy in the desk, the late arrival of some kiddie, changes in the weather, needing suitable clothing, return of children from quarantine or the exclusion for illness or exposure to infection. All these and many more could be made the basis for health talks to the Junior pupils.

While any boy of 13 should enthuse as to the relative merits of baseball or lacrosse, from the standpoint of physical development, and at least show some interest in a request to figure out, a comparative table of the air space in the Black Hole of Calcutta and his own classroom, and the amount of air available for the occupant of each, using this historic incident to drive home your lesson of the value of fresh air, etc. These are only a few suggested possibilities, our hope being as outlined earlier, to emphasize the importance of the subject and to present it so that it may be readily taught and easily absorbed.

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## Editorial

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### Child Welfare Work and Canada

ON reading the lecture delivered by Sir Arthur Newsholme on "National Changes in Health and Longevity" one is reminded and forced to think of what is really being accomplished in the way of building up a healthier race in Canada. In this particular connection we think of the results of the active work being done amongst the children of our country; as to whether the lives which are yearly being saved and the sickness which is being lessened is tending to provide a generation for our country which is going to be more robust than the present one.

There has always been the suggestion that the increased survival means an inferior population, but when we consider what actually happens it is evident that this is not so and that we are not preserving weaklings; but rather are preserving our robust children from being made weaklings by the infectious diseases and other factors, such as improper foods, which in the past have damaged irreparably our children in their early life, and which are now at least to some extent being controlled.

So in the Child Welfare work which is being carried on, while we may feel encouraged by our lessened mortality rates, surely the real encouragement we should feel is in the fact that each year children are advancing into maturity undamaged; protected by the simple rules of health, proper food, fresh air, and sufficient sleep, which are being cried from the housetops so that all mothers may know the foundation upon which to build the future health of their children, and realizing this, let us continue our efforts to provide Canada with a healthy, vigorous and happy people.



## Book Reviews

*The Sex Factor in Human Life.* A study outline for college men. By T. W. Galloway, Ph.D., The American Social Hygiene Association, Inc. New York.

This book, as the introduction states, is written primarily for groups of college men joined together for voluntary discussion of those points at which sex bears most directly upon the happiness and sanity of every life. It is hoped that it may have in addition a value to any thoughtful men or women who are ready to fit themselves to accept leadership for the sake of the younger boys.

Chapter titles include appetites and their place in life, nature of sex and some of its effects on human development, some popular misconceptions about sex, sex and inheritance, marriage, democracy and the home, sex and religion, reference bibliography.

The book is carefully written. The author speaks with authority and in discussing many phases of the social hygiene question brings forward for consideration and decision various matters over which a large percentage of his readers have probably puzzled in vain. The book in the main is in question and answer form. Its perusal will repay not only the type of student for which it is primarily intended but any one interested in the fields of social hygiene, sex hygiene or venereal disease control.

G. A. B.

*Home Nursing.* By Abbie Z. Marsh, Portland, Oregon. Philadelphia, Blakiston's Son & Co. Cloth, pp. 268. \$1.25.

In preparing this book the author seems to have endeavoured to combine a text-book for teachers of Home Nursing and a guide book for an inexperienced mother, who must deal with sickness in the home.

The book is in three parts, devoted respectively to:

- (1) General nursing care.
- (2) The symptoms and treatment of disease.
- (3) Infant care and feeding.

The simpler portions of Part I, on General Nursing Care, might with benefit be taught to girls in the proposed fifteen lessons. If every young woman could be given a thorough understanding and appreciation of the material contained in the first seven chapters the world should be a healthier and more comfortable place to live.

The second and third parts of the book are too complicated for the lay reader, and so technically inaccurate as to be unserviceable to the

teacher of home nursing. There may be a question as to the wisdom of including so much medical material but the author has endeavoured to urge her readers to seek skilled advice in times of illness and accident.

Her desire is evidently to serve the mother who cannot easily reach her doctor, as well as to urge upon all the importance of doing so by emphasizing the seriousness of neglect.

As a text-book this production has very distinct limitations, but, if used with intelligence and discrimination, may be of value for reference.

E. RUSSELL.

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# The Public Health Journal

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## The Etiology of Tuberculosis

(From the Clinical Aspect.)

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### HEREDITY.

IN discussing the etiology of Tuberculosis from the clinical aspect, it would appear to be unnecessary to give any consideration whatever to heredity. It may suffice to say that the generally accepted belief is that a child is at birth free from tuberculosis even though one or both parents may have been tuberculous, either at the time of conception or later. And while there may be influences which produce effects in the germinal, embryonic, or foetal periods of ante-natal life "it is very difficult," as Ballantyne (1) of Edinburgh, has said, "to obtain convincing evidence on these matters." "The whole question of germinal infection and its dangers has hardly yet emerged from the purely speculative phase."

### HEREDITARY PREDISPOSITION

But while heredity itself may, by consent, be thus readily set aside, there is still a prevalent opinion that at least "hereditary predisposition" is an important factor in the etiology of this disease.

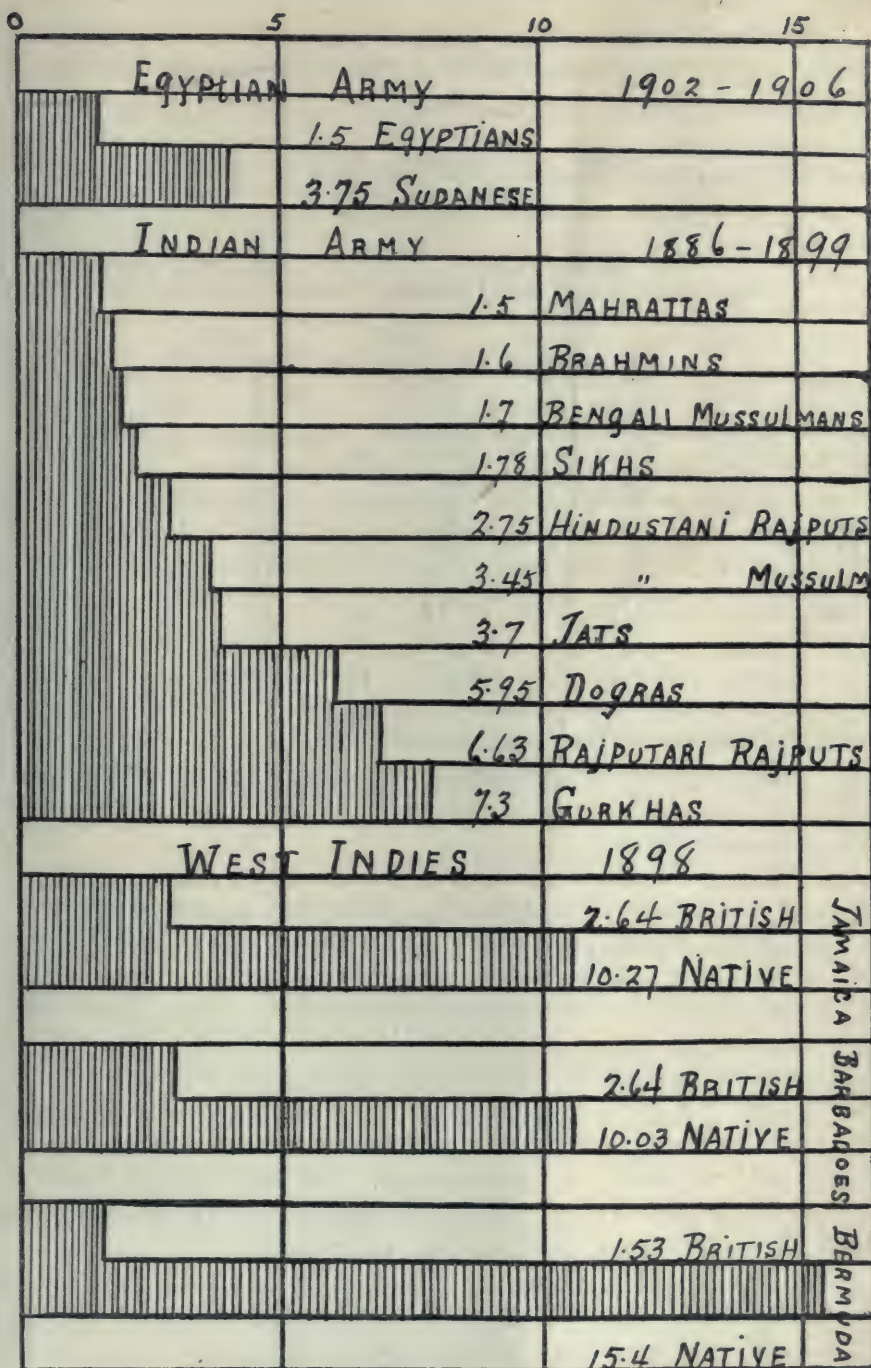
Even as early as the time of Hippocrates reference was made to the common association of tuberculosis with certain hereditary physical characteristics. Koch himself held that the inheritance of tuberculosis is explained most naturally by supposing that it is not the infective germ itself, but rather the disposition to tuberculosis which is inherited.

More recently this same idea has been carefully elaborated by Pearson (2), who concludes that "the diathesis of pulmonary tuberculosis is undoubtedly inherited."

In as recent a work as Barker's *Monographic Medicine* (1920), Elsnor (3), states that "What the offspring of the tuberculous parent inherits is a vulnerability, a predisposition, which makes the child ready to develop tuberculosis on slight cause. The susceptibility in other words is greater in the offspring of the tuberculous than in the child coming into the world without handicap."

In this view we cannot now concur. For if it be true that there is such an hereditary predisposition to tuberculosis the incidence and mortality of the disease should be much greater in those races who have lived where tuberculosis is prevalent than in those who have lived where tuberculosis is rare. In demonstrating that this is not the case, but that rather the contrary is true, Cummins (4), of London, shows that "the rarity or absence of clinical tuberculosis amongst isolated tribes, living under conditions of primitive culture is associated with a rarity or absence of the tubercle bacillus." After quoting in this connection, interesting statistics showing the results of tuberculin tests, among which are some by Zieman, graphically recorded, showing the high incidence of infection among those African tribes which have been long associated with Arabs and Europeans as compared with those which have been more isolated, he goes on to say that "it is clear, then, that amongst the members of communities of the kind under discussion there can be no trace of hereditary liability to tuberculosis." Such being the case he proceeds to inquire how the members of these primitive tribes react when exposed to infection by the tubercle bacillus. He reports from investigations made in 1907 that "the Sudanese coming from districts where tuberculosis, either human or bovine, was unknown, showed under military conditions a marked liability to the disease, while the Egyptians, amongst whom tuberculosis has been prevalent since dynastic times, were much more resistant. Further evidence of a similar nature from the native army of India, and the British and African military units in the West Indies is produced.





TUBERCULOSIS INCIDENCE PER MILLE IN DIFFERENT RACES UNDER MILITARY CONDITIONS

In the recent war also, statistics indicate "that there were more deaths from a few companies of Africans than from the whole of the British troops in France, viz.:

TUBERCULOSIS CASES AND DEATHS, 1917-1918 IN THE BRITISH  
ARMIES IN FRANCE.

|                 | British Troops                  |        |       |        | Cape Boys and Kaffirs.       |        |       |        |
|-----------------|---------------------------------|--------|-------|--------|------------------------------|--------|-------|--------|
|                 | Average strength over 1,500,000 |        |       |        | Average strength over 11,000 |        |       |        |
|                 | 1917                            |        | 1918  |        | 1917                         |        | 1918  |        |
|                 | Cases                           | Deaths | Cases | Deaths | Cases                        | Deaths | Cases | Deaths |
| January .....   | 125                             | 10     | 157   | 8      | 8                            | 1      | 19    | 15     |
| February .....  | 132                             | 6      | 117   | 7      | 4                            | 2      | 14    | 11     |
| March .....     | 143                             | 5      | 96    | 7      | 4                            | 4      | 21    | 11     |
| April .....     | 119                             | 8      | 107   | 14     | 14                           | —      | 19    | 13     |
| May .....       | 168                             | 13     | 125   | 6      | 13                           | —      | 21    | 18     |
| June .....      | 206                             | 10     | 135   | 9      | 19                           | 7      | 20    | 14     |
| July .....      | 156                             | 4      | 117   | 4      | 15                           | 7      | 12    | 8      |
| August .....    | 167                             | 11     | 124   | 6      | 16                           | 8      | 17    | 12     |
| September ..... | 130                             | 5      | 62    | 2      | 17                           | 5      | 9     | 6      |
| October .....   | 104                             | 7      | 71    | 3      | 11                           | 14     | 4     | 1      |
| November .....  | 111                             | 4      | 62    | 2      | 12                           | 7      | 8     | 1      |
| December .....  | 99                              | 8      | 48    | 6      | 23                           | 14     | 7     | 3      |
| Total .....     | 1,660                           | 91     | 1,221 | 74     | 156                          | 69     | 171   | 113    |

165 deaths in 2,881 cases amongst 1,500,000 British, or 5.7 per cent. mortality and .012 per cent. incidence, as against 183 deaths in 327 cases amongst 11,000 Africans, or 56. per cent. mortality and 2.9 per cent incidence.

Thus it is demonstrated that both incidence and mortality are greater in those least likely to have inherited a predisposition.

From the clinical standpoint then we may safely say that what has been commonly regarded as an "*hereditary predisposition*," does not in fact exist, but, as will be shown later, the evidence which has been taken as pointing to "*hereditary predisposition*" has in reality been pointing to "the absence of acquired resistance."

Pearson (6), explains that the theory of inherited resistance is not affected in any way by the fact, that isolated groups of mankind have little resistance to tuberculosis. He says it is rather what we should expect on the theory of evolution by natural selection with the transmission of hereditary characters.

On the contrary, however, Krause (7), of Baltimore, believes that "the little that we know about specific immunity indicates that at some future time it will be found that a cumulative ancestral experience with active tuberculosis transmits increased resistance to the progeny."



## THE INFECTION.

In tuberculosis the infecting organism is either the human or the bovine tubercle bacillus. The latter while of considerable importance in the childhood period, is a negligible factor in adult life; the former, on the other hand, is not only the cause of a considerable proportion of the disease in childhood, but is almost the sole factor in adults.

## THE SOURCE OF THE INFECTION.

It is now also generally conceded that tuberculosis is a contact disease. It is recognized to be essentially a disease of crowded communities, its prevalence and gravity increasing with the density of the population. The use of the tuberculin reaction has shown that in any populated community about 55 per cent. of the children who have reached the fifth year, and more than 95 per cent. of adults harbour the bacilli.

Raymond Pearl (8), asserts "that a tuberculosis person chosen at random from the working class population will have nearly six times as many blood relatives tuberculous as will a non-tuberculous person taken at random from the same population."

## INFECTION AND DISEASE.

Not only is it a contact disease, but it is now indeed generally held that it is usually an infection of childhood. It is in the early years of life that contact with those who are tuberculous is most dangerous. For this there are two reasons: 1, unusual opportunities for infection, and 2, the absence of any marked degree of specific resistance. To appreciate the former of these it is only necessary to recall some of the opportunities there are for the child to become infected, viz.:

(1) Direct contact with adults who are tuberculous;

(2) Contamination through articles of food;

and (3) The habit children have of crawling on the floor and putting the hands and various articles in the mouth.

The extent to which infection with the tubercle bacillus occurs in children is shown both by the tuberculin test and by post mortem examination.

PERCENTAGE OF CHILDREN REACTING TO TUBERCULIN TEST, ADMINISTERED ONCE (NEW YORK).

| Age.                 | Number | Positive |           | Negative |           |
|----------------------|--------|----------|-----------|----------|-----------|
|                      |        | Number   | Per cent. | Number   | Per cent. |
| Under 6 months ..... | 22     | 1        | 4.54      | 21       | 95.46     |
| 6 to 12 months ..... | 34     | 5        | 14.71     | 29       | 85.29     |
| 2 years .....        | 39     | 13       | 33.33     | 26       | 66.67     |
| 3 " .....            | 36     | 14       | 38.89     | 22       | 61.11     |
| 4 " .....            | 44     | 19       | 43.18     | 25       | 56.82     |
| 5 " .....            | 51     | 24       | 47.06     | 27       | 52.94     |
| 6 " .....            | 55     | 29       | 52.73     | 26       | 47.27     |
| 7 " .....            | 45     | 27       | 60.00     | 18       | 40.00     |
| 8 " .....            | 45     | 28       | 62.22     | 17       | 37.78     |
| 9 " .....            | 40     | 27       | 67.50     | 13       | 32.50     |
| 10 " .....           | 43     | 30       | 69.77     | 13       | 30.23     |
| 11 " .....           | 35     | 22       | 62.86     | 13       | 37.14     |
| 12 " .....           | 44     | 29       | 65.91     | 15       | 34.09     |
| 13 " .....           | 35     | 27       | 77.14     | 8        | 22.86     |
| 14 " .....           | 20     | 15       | 75.00     | 5        | 25.00     |
| Total .....          | 588    | 310      | 52.72     | 278      | 47.28     |

Plate No. 3 is from Fishberg and shows the ages of the children and the number and proportion giving positive and negative reactions. These were given one test only.

In 588 cases the test was positive in 310 cases or 52.72 per cent. and it was negative in 278 cases or 47.28 per cent.

PERCENTAGE OF CHILDREN REACTING TO TUBERCULIN ACCORDING TO AGE PERIOD TEST REPEATED WHEN NEGATIVE (VIENNA).

| 46  | Children in the | 2nd year of whom | 4 of | 9 per cent. reacted |
|-----|-----------------|------------------|------|---------------------|
| 56  | "               | 3rd              | 11   | 20                  |
| 75  | "               | 4th              | 24   | 32                  |
| 50  | "               | 5th              | 26   | 52                  |
| 63  | "               | 6th              | 32   | 51                  |
| 46  | "               | 7th              | 28   | 61                  |
| 30  | "               | 8th              | 22   | 73                  |
| 35  | "               | 9th              | 25   | 71                  |
| 26  | "               | 10th             | 22   | 85                  |
| 29  | "               | 11th             | 27   | 93                  |
| 19  | "               | 12th             | 18   | 95                  |
| 17  | "               | 13th             | 16   | 94                  |
| 17  | "               | 14th             | 16   | 94                  |
| 509 |                 |                  | 271  |                     |

Plate No. 4 is from Hamburger, and shows results when the tests were repeated if at first negative. In 509 cases 271 or 53.2 per cent. were positive. It is to be noted, however, that the per cent. increases with the age and after the tenth year it is 85 per cent. or more.



PERCENTAGE OF CHILDREN SHOWING TUBERCULOUS INFECTION ON  
POST-MORTEM EXAMINATION.

| Age     |                | Number<br>of those<br>Examined | Free<br>from<br>Tuber-<br>culosis | Infected<br>with<br>Tuber-<br>culosis | Died of<br>Tuber-<br>culosis | Latent<br>Tuber-<br>culosis | Latent<br>Tubercle<br>Bacilli |
|---------|----------------|--------------------------------|-----------------------------------|---------------------------------------|------------------------------|-----------------------------|-------------------------------|
| 1st yr. | 1st quarter... | 82                             | 76                                | 6                                     | 4                            | ...                         | 2                             |
|         | 2nd quarter... | 55                             | 46                                | 9                                     | 4                            | ...                         | 5                             |
|         | 3rd quarter... | 36                             | 20                                | 16                                    | 10                           | 1                           | 5                             |
|         | 4th quarter... | 28                             | 19—80                             | 9—20                                  | 6—                           | 2—                          | 1—                            |
|         |                | 201                            | 161                               | 40                                    | 24                           | 3                           | 13                            |
| 2 years | .....          | 65                             | 48 74                             | 17 26                                 | 14                           | 1                           | 2                             |
| 3 "     | .....          | 26                             | 18 69                             | 8 31                                  | 4                            | 1                           | 3                             |
| 4 "     | .....          | 18                             | 12 67                             | 6 33                                  | 5                            | 1                           | ...                           |
| 5 "     | .....          | 16                             | 7 44                              | 9 56                                  | 8                            | ...                         | 1                             |
| 6 "     | .....          | 12                             | 2 20                              | 10 80                                 | 8                            | 1                           | 1                             |
| 7 "     | .....          | 13                             | 7 54                              | 6 46                                  | 3                            | ...                         | 2                             |
| 8 "     | .....          | 20                             | 7 35                              | 13 65                                 | 6                            | 6                           | 1                             |
| 9 "     | .....          | 9                              | 3 33                              | 6 67                                  | 3                            | 2                           | 1                             |
| 10 "    | .....          | 11                             | 3 27                              | 8 73                                  | 4                            | 4                           | ...                           |
| 11 "    | .....          | 14                             | 1 7                               | 13 93                                 | 7                            | 4                           | 2                             |
| 12 "    | .....          | 13                             | 4 31                              | 9 69                                  | 6                            | 3                           | ...                           |
| 13 "    | .....          | 13                             | 4 31                              | 9 69                                  | 4                            | 5                           | ...                           |
| 14 "    | .....          | 13                             | 1 8                               | 12 92                                 | 4                            | 8                           | ...                           |
| 15 "    | .....          | 40                             | 8 20                              | 32 80                                 | 19                           | 13                          | ...                           |
|         |                | 484                            | 286 59                            | 198 41                                | 119                          | 52                          | 27                            |
|         |                |                                |                                   | 484                                   |                              | 198                         |                               |

Plate No. 5 is from Harbitz, and shows the frequency of infection in children as revealed by post-mortem examination. Of 484 examined, lesions were found in 198 or 41 per cent. and no lesions were found in 286 or 59 per cent.

#### INFECTION AND DISEASE.

It is most important throughout the consideration of this subject to keep clearly in mind the difference between *Infection* and *Disease*. In a person who comes in contact with the tubercle bacillus for the first time, there will develop either *immunity* or *disease*—immunity if the dose is not massive, and the power of resistance is good—disease if there be a massive dose or poor resistance or both.

When infection takes place in a child the focus may:

(1) develop rapidly into active Tuberculosis as is commonly the case in very young children.

(2) or it may become quiescent for a time.

(3) or it may heal.

If healing takes place it is accompanied by the development of a degree of immunity which supplies the child with a certain resistance to subsequent infection—a relative immunity of course, varying in different individuals and under different circumstances, leading later if massive infections are encountered to the more resistant types of the disease. If temporary quiescence only is attained there is a recrudescence at a later period in which other factors play a part.

If in a subject not previously infected, the dose has been a massive one, neither healing nor temporary quiescence occurs, but on the contrary a severe and rapidly developing type of disease ensues which may be either miliary, pneumonic, or meningal in form and it almost always terminates fatally.

#### RESISTANCE.

Childhood infection is therefore the keynote to the whole etiology of tuberculosis. Thus far the etiological factors are simple—viz.:—no heredity;

no hereditary predisposition.

but rather infection by contact usually in childhood.

Ordinary contact with the tuberculous is not dangerous as a rule to adults. Formerly it was believed that everything a tuberculous patient handled was a source of danger to others. Brown, Petroff and Pasquera (12), however, studied experimentally the etiological significance of such things as the dust of rooms, eating utensils, contaminated hands, the saliva, the tooth brush, flies, and coughing, and they conclude that “the danger of the dust of rooms in a health resort, from telephone receivers, the danger of eating utensils properly cleansed, the danger from infected hands, through handshaking or from knobs of doors, the danger of transmission from infected flies, at least in guinea pigs, has not been conclusively proved, and these experiments tend to belittle it. On the other hand the danger of transmission of tubercle bacilli by kissing, or the transference of the tubercle bacilli to eating utensils, and thence if not cleansed to a second person has been borne out.”

The experiments of Rogers (13) of Cincinnati along similar lines are also of interest.

My own comment in regard to these conclusions would be that, as regards young children, it would be safer to avoid any or all of these possible definite sources of infection. But there are other factors less tangible and more complicated. Why do some who are



exposed survive while others succumb? Entirely on account of *Resistance*. We find, however, that when we come to ask what this resistance is, how it is developed, when it is produced, etc., that numerous difficulties present themselves. What is this Resistance?

Most assuredly there is a factor in Resistance due to an altered capacity of the body cells to react to the products of the tubercle bacilli.

On this Krause (14) is most emphatic. He says, "But with the development of anatomic tubercle other deep-seated changes also take place in the animal body. For twenty years it has been recognized that an animal with tubercle can withstand relatively enormous numbers of living virulent tubercle bacilli as compared with a normal animal. For twenty years and more the details associated with this phenomenon of acquired increased resistance have been studied and the results of these studies may be summarized as follows: (1) The development of anatomic tubercle endows the body with the power to resist greatly increased numbers of tubercle bacilli. (2) This increased resistance to infection manifests itself with the establishment of the first foci. (3) Up to a certain point resistance is directly proportionate to the extent and severity of the initial disease. (4) With the healing of the diseased foci resistance diminishes. (5) If the animal remains tuberculous the increased power to resist is probably never lost, nor does resistance sink to the level which obtained before the animal was first infected."

The presence of this specific cellular immunity, produced as a result of infection, is the greatest factor in rendering the disease caused by subsequent infections or by metastases chronic in type and its absence is the greatest factor in rendering tuberculosis in infants more fatal than in older children.

#### IS THERE ANY DANGER FROM RE-INFECTION FROM WITHOUT?

Some have maintained so strongly that all clinical tuberculosis results from infection in early life, that they have been forced also to hold that it is impossible for a second infection to occur from without. While it is probably true that adults have little to fear from infection from without unless the contact be prolonged, the dose massive, and the carelessness gross, it can hardly as yet be considered proven that it is impossible for a second such infection to occur.

It is in fact, probably true that adults may contract tuberculosis, but in order for this to take place there must be either an absence

of previously developed specific cellular immunity, or extremely massive doses of infection.

Generally speaking, it may be safely said that in this country an adult has little to fear from infection from without, because all have had abundant opportunity to react to frequent small infections and so to develop the necessary relative immunity. What adults have most to fear is the development of metastases within. But this cellular immunity is not all that constitutes Resistance.

*The Age Factors.*—Infancy and early childhood are the usual periods in which *infection* occurs, and early adult life is usually considered to be the period in which *disease* most usually presents itself. There is, however, a most prevalent misconception as to the mortality of tuberculosis at different age periods, due probably to the practice of comparing the number of deaths from tuberculosis with the number of deaths from all causes. On the other hand, if the deaths from tuberculosis be compared with the number of persons living at any age period it will be seen, as shown by Landis, (26), that "Tuberculosis continues unabated its extensive ravages even among elderly persons." (27). Or as has been concisely stated (28) "in the white population beginning with the twentieth year of life all persons are equally liable to death from tuberculosis."

#### *The Mechanical Factors.*

There are also mechanical factors.

#### *Fibrosis.*

In every tubercle we have an effort on the part of Nature to build a mechanical barrier by which the invading foreign body may be walled off and rendered innocuous. The degree to which this fibrosis is produced determines the extent to which the body will be free from the toxic effects of the parasite. But in this mechanical protection chance, as Krause has suggested, plays an important role. It is mere chance that a tubercle should have developed in close proximity to a blood vessel, leading suddenly to a pulmonary haemorrhage. It is mere chance that a tuberculous process in a bronchial gland should open into a bronchus resulting in an acute pneumonatic process. It is mere chance that a tuberculous gland should ulcerate into the thoracic duct. In such cases *Resistance* consists entirely of the degree to which fibrosis is sufficient to protect. In the cases cited the degree of protection was slight indeed, but in other cases a similar development of fibrosis, but in a differ-



ent location, may be sufficient to protect the individual from symptoms due to toxic absorption for many years. Shaw (15), of North Dakota, by injecting tubercle bacilli into the blood stream of rabbits with one collapsed lung, found that the lesion developed in the collapsed lung and in no other organ. And he concludes that the collapse of the lung changes the resistance of the animal at the point of collapse, and he asks if this may not be true of atelectatic areas in the lungs, and if pleurisy with effusion may not be the traumatic factor which cause the pulmonary collapse, allowing the subsequent formation of tubercle.

Shaw's results, however, are not confirmed by similar experiments by Corper, of New Haven (16), and his associates, who found that compression of one of the lungs of a rabbit has no visible influence on the number or type of the tuberculous lesions resulting from the intravenous injection of virulent human tubercle bacilli.

#### *Irritants.*

Corper (17) also, in a series of experiments to determine the effect of various local irritants found "that regional gland crushing, the subcutaneous injection of turpentine, croton oil, tincture of cantharidin, tincture of capsicum—had no appreciable influence—upon the progress of the infection compared with that obtained in control guinea pigs." Lampblack had a distinct retarding influence, and finely pulverized glass a markedly accelerating influence. He ventures the opinion that these results lend scientific verification to observations made especially by workers in the field of industrial diseases, such as (1) That phthisis is not as common among coal miners as among the ordinary population. (2) That workers in flint or quartz are especially liable to pulmonary tuberculosis.

It may be of interest here to mention, also, the suggestion that sulphur dioxide has some effect in producing an immunity to tuberculosis. Tweedell (18) states that among 11,085 men employed by 29 companies, only 21 cases of tuberculosis were noticed. Of these six were known to be tuberculous before employment, two were suspects only, five followed epidemic influenza, leaving only eight cases to be actually counted. This would give an incidence of only one case in 1,385 persons for this group. Figures such as these, of course, require both verification and explanation.

But here again we arrived at a point where explanations are not by any means so clear. What is it that determines whether

there is to be fibrosis or caseation, degeneration or repair? Is there (1) a Racial Factor! (2) is there a factor due to environment; (3) is there a Constitutional Factor?

#### RACIAL FACTOR.

As to whether or not there is a racial factor to be considered Pearly (19) states it as a "broad general fact that there are wide differences in respect of mortality from tuberculosis among different race stocks living in the same general environment, and in support of this contention he summarizes from Dublin and Baker (20) the following as an example:

Contrast the Italian, with a male mortality at all ages from tuberculosis of 81.5 per 100,000 in Pennsylvania, with that of Irish males in the same state, which reaches the value of 342.8 per 100,000. For the same two race stocks the females show, in the same state, mortality rates of 102.2 and 201.2 per 100,000 respectively." And he concludes that "It is evident that the Irish react to the same environment in a totally different way than do the Italians in respect of tuberculosis." The Irish males have a mortality rate four times as great as the Italian males; the Irish females have a mortality rate twice as great as the Italian females.

#### ENVIRONMENT.

In considering the influence of environment as a factor in etiology we should include within the scope of the term not only physical surroundings, such as housing, personal, family and municipal hygiene, but the environment of occupations, contact with intercurrent diseases such as measles, influenza, pneumonia and the like, as well as those influences which result from recreations, amusements or dissipations, not to mention those associated with the perpetual struggle for existence or place in life. In all of these, which are the common accompaniments of substandard living, we have at work influences which make for the undermining of general health, and as such they must be conceded to be factors which hinder the formation of the mechanical defence which Nature so much desires, viz., fibrosis. They are, therefore, factors always deserving of recognition in the etiology of clinical tuberculosis. It is in this connection and on this account that we see cases of tuberculosis developing after measles, pneumonia, influenza and the like, or during those years in which the struggle of life is most strenuous. It is a mistake to say that at such periods the disease was



contracted. The infection took place probably years before, the metastases, with the resulting disease *developed* at these times.

#### CONSTITUTIONAL FACTOR.

But environment does not seem to satisfactorily explain certain aspects of the problem. Raymond Pearl (21) dealing with this subject observes that "of the two moieties of the infected, those on the one hand who do, and those on the other hand who do not develop the disease in clinically active form, many can be readily shown to have lived under essentially or statistically the same environmental circumstances," and he endeavours to demonstrate that the inherited constitution of the individual is a factor of more than negligible importance.

That this is true we must admit. We do not all react with the same vigour, or to the same degree to anything. It is this indeed which constitutes individuality. On account of it we resist the various general infections differently. And while it is true that the only specific immunity to tuberculosis must be produced by infection by living and virulent bacilli producing a tubercle, we cannot deny that even in this there must be factors peculiar to the individual, a personal equation as it were. Concerning this we know but little, for while the general defensive mechanism provided by the lymphatic system and the cellular elements are in a measure understood, the whole subject of endocrinology, as it relates to tuberculosis, as well as to other diseases, has yet to be investigated. In this connection Webb (22) and his associates as also Heise and Brown (23) have done some experimental work on the relation between the suprarenal function and tuberculosis, and their results tend to suggest that in this disease there is a demand for increased suprarenal function. Pottenger (24) emphasizes the importance of the relationship of the sympathetic nervous system to toxemia and the depressive emotional states in tuberculosis.

It may with reason be said that Calmette's (25) suggestions are entirely worthy of adoption. He holds that since every human being under the present social conditions is exposed from an early age to bacillary infection, it is most necessary that children be kept under strict supervision, so that any recent contamination may be detected and its source determined. The guiding principle in the social campaign against tuberculosis is the protection of healthy subjects, whether infant or adult, against massive or frequent infections.

In conclusion, it must indeed be admitted that the book or knowledge of the etiology of this disease is not by any means as yet closed. Sufficient is already known, however, for guidance in certain practical measures.

As a summary the following may be presented:

(Table). *Etiology of Tuberculosis. (From the Clinical Aspect.)*

1. No heredity.
2. No hereditary predisposition.
3. Infection by contact, usually in childhood.
4. Disease develops in adult life, from within.
5. Resistance.
  - (1) Specific cellular immunity from a tubercle.
  - (2) The Mechanical Factor—Fibrosis.
  - (3) The Racial Factor.
  - (4) The Factor due to Environment.
  - (5) The Constitutional Factor.

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# The Healthy Child---Our Greatest National Asset

BY HOWARD SPOHN, M.B.

1. Read before the British Columbia Child Welfare Association.—  
Vancouver, October 1920.

**I**T affords me great pleasure to have an opportunity of addressing the British Columbia Child Welfare Association. Coming so recently from the East I am not familiar with your work here, and I have been especially interested on this account in your proceedings.

All of us interested in Child Welfare look upon this work as one of stupendous national import. The health, wealth and happiness of the nation as a whole depends on the individual, that is, upon the fitness of the children who must carry on the national affairs of their generation. We, who are interested in this task are masons trying to build a true, strong foundation upon which a lasting superstructure of continued health may be erected.

Healthy children are the product of healthy parents, and need for proper development, to be reared in healthy surroundings on healthy food. To strive to make these requirements procurable for every child is the aim of the Child Welfare and other allied associations. The ways and means through which we hope to attain our end have changed somewhat, but are now settling down into certain definite and approved channels of effort. Some of these I will briefly endeavor to review. Not being familiar with the work that has been done, and is being done in British Columbia, I may be touching on aspects of the situation that have been solved, or, are in the process of being solved. Anything I may offer is not being done as a criticism of work here—it is more a statement of plans I have seen in operation.

Some features which are intimately connected with the development of a healthy child are:—

- (1) Absolute necessity of healthy parentage.
- (2) Importance of proper nutrition.
- (3) The proper organisation and co-operation of all associations interested in the work.
- (4) The influence of proper home surroundings.



It has been truly said that the baby's life pathology begins nine months before birth. The great feature in this important epoch is the health of the parents, especially in the mother. Heredity from the purely physical side is something that must always be reckoned with. In order that there may be no unfortunate misunderstandings we should recognize that there are certain mental and physical congenital or birth defects for which the parents are in no way responsible. Such conditions as mongolian idiocy and conditions due to obscure defects in internal secretion, should not in any way be looked upon as indications of parental neglect or error. Apart from such obscure and infrequent causes mental and physical deficiencies in the new born are largely due to hereditary taints. The statistics of infant mortality gathered from all sources are appalling. The rate of mortality is extremely high and, of course, varies somewhat according to the community.

In the last five or ten years great things have been done by Welfare and other allied workers for the health and welfare of the child. One great hindrance to the work is that the general public is not sufficiently interested. A large part of the population when appealed to on behalf of this work shrug their shoulders and say they do not understand such matters and are quite content that they should be left in the hands of the medical profession. This is an absolutely wrong view point. To intelligently vote on public questions of the day, we must have some knowledge of these questions. Is it also not fair to expect that those who are to take upon themselves the responsibility of raising and providing for coming generations should have an understanding of the conditions that are injuring the health and increasing the death rate of children? In a talk such as this it is impossible to approach all aspects of the question, but I want to briefly and frankly discuss some of the conditions which go to produce the healthy child.

It is an acknowledged fact that healthy parents are essential for healthy children. How can we increase the percentage of healthy newborn infants? Nothing to my mind is more important than the possession at the time of marriage of a clean bill of health of both contracting parties. In these days when we hear so much of the cultivation and preservation of fine fruit and livestock, would it not be very much to the point to apply common sense practical methods to the raising of children? If before a parent commits the care and responsibility of his child to another he deems it necessary to inquire into the material prospects of his future son-in-law, why should he not take precautions to safe-

guard the future happiness and health of the coming wife and her unborn children? The churches have encouraged this idea, but so far as I know it has not been officially recognized by any of them. This would not be necessary, however, if every parent would, as a matter of course, demand a physical certificate of health. More can often be accomplished by having the public demand a certain standard, then by passing numerous and sometimes complicated legislative enactments. The figures showing the prevalence of venereal disease are appalling. Their consequences baffle description. Evidences of them are seen on every side, in the home, in the hospitals and in the asylums. There are in the United States alone 75,000 deaths annually from preventable disease. "An ounce of prevention is worth a pound of cure" can fittingly be applied to this work. The problem of preventing venereal disease is a complicated one involving morals, social relations, sanitation and economics. It should be generally known that these diseases are more widespread than tuberculosis and that there follows in their wake unspeakable misery, incalculable economic waste and frequently death. Prudery, false modesty and ignorance should not be allowed to stand in the way of frank and honest discussion. Prostitution is the means by which these diseases may be carried to innocent women and children. Continency is compatible with health and is the best safe-guard against venereal infection.

It is the duty of the medical profession to inform the general public of the dangers of these diseases. The public should know that gonorrhoea is one of the most prevalent of infectious diseases that has certain complications as gonorrhoeal heart disease and gonorrhoeal rheumatism, etc., that a complete cure is essential to safeguard the health of the individual and those with whom he comes in contact, that over fifty per cent. of the gynecological operations or operations especially related to women are caused by this disease; that a great many unfortunate marriages are caused through this agency and that a countless number of women have been sentenced to chronic invalidism through this agency, and that eighty per cent. blindness in infants is due to this disease. In fact that it tends greatly to reduce the standard of efficiency in life.

Syphilis is an entirely different disease, but may co-exist with gonorrhoea. It should be known that syphilis is a general blood infection transmitted with contact and curable only by prolonged scientific treatment. It is a most loathsome and dangerous disease and is transmitted at times as far as the third generation. From eight to ten per cent. of the population are infected. Many diseased



children are born as the result and the mortality in such children ranges from fifty to eighty per cent. It is responsible for one-fourth of all cases of insanity and untreated leads always to business incapacity, inherited diseases, insanity or death. The consequences of such infection can be emphasized by the following typical summary of an authentic case in the life of an important member of a community. "He developed general paralysis at fifty, only one of his sons reached manhood, his only daughter was a chronic invalid and his wife wondered at the puniness of his grandchildren."

In connection with this all-important question, no factor is more important than the establishment of a pre-natal clinic in connection with every well organized general hospital. Through this important agency treatment can be given during the pre-natal period and through this the mother may be able to give birth to a healthy child, or at least to a child that has a much better chance of surviving. After birth the child can be immediately passed on for treatment in the hospital or through the hospital clinic.

It is not sufficient for a child to be born healthy; we must strive to keep it healthy. Proper feeding is the most important factor in the early life of each individual. There is no real substitute for breast milk and it is therefore the duty of every mother to nurse her baby if at all possible. Welfare workers, well baby clinics, etc., should emphasize this necessity to all mothers with whom they come in contact. Statistics from numerous countries vary somewhat, but a general survey establishes the following averages. About one-fourth of all deaths in infancy occur during the first year of life. Of these deaths forty per cent. are due to gastro-intestinal or disturbances due to improper nutrition. In Ontario nearly 7,000 babies under one year of age die annually. That is nearly 7,000 homes are bereaved annually. How does the breast-fed baby fare in this battle for existence? Statistics gathered from all over the world show that the breast-fed child has from four to five more chances of surviving than the artificially fed. If it were possible to have two children with identical physical characteristics and to bring up one on breast milk and the other on artificial food, the breast-fed child would always be a better physical specimen.

Twenty years ago more mothers were nursing their babies than at present, but in America and elsewhere the benefit of the Welfare and Hospital work is beginning to tell, for the number of breast-fed children is increasing and the period of nursing is lengthening. It has been estimated that from sixty to eighty per cent of all mothers

can successfully nurse their children. Pinard in France, under war conditions, maintained 100 per cent. efficiency with nursing mothers. This percentage is not being maintained in many countries including Canada. Figures show that the well-to-do are nursing their babies less frequently than the poorer classes. This is obviously a condition which should not exist. The failure of mothers to nurse their children is due to the following causes:—

(1) Physical inability which may be inherited and over which the mother has no control.

(2) Improper instructions by the physicians as to the importance of nursing and the methods of establishing and maintaining the breast supply.

(3) Improper methods of living and dress during pregnancy and the lactated period.

(4) Indifference on the part of the mother.

(5) Poverty, with lack of proper nourishment and good hygienic surroundings. The last condition is a disgrace to any country. Infant life is too valuable for any country to permit the nursing mother to wean her child through poverty or necessity. In Ontario the mother cannot wean her baby until the eighth month. This is a necessity and still in many cases a hardship on the mother who has to earn the livelihood. Is it not unfair for example, to ask the mother of an illegitimate child, deserted by the father, to continue to nurse her offspring and earn her own living? Surely all of us must unceasingly impress on the public and those in authority the necessity for mothers pensions. Is it not fair to ask that the illegitimate child should receive the name of his father and that the responsibility for maintenance and education should rest equally on the shoulders of both parents? This would encourage these mothers to properly nurse and care for their unfortunate children and give them a decent start along what is usually a very rough road.

If a child is not breast-fed, its feeding should be supervised in a Well Baby Clinic. If it is not a normal child it should be treated through a hospital clinic. In my opinion it is essential to separate the treatment of well and sick infants. No sick baby should go to a Well Baby Clinic or the aim to keep the infant well is frequently defeated. Hospitals are for the sick and not for the well. Normal infants and many children not acutely ill often are much more successfully treated in the home than in a hospital and Welfare workers can do much to supervise these homes and provide foster homes for illegitimate and neglected children. Fresh air, sunlight



and proper surroundings are necessary for the health of the child. The Welfare Association can aid materially in securing these things for unfortunate children. Playgrounds for recreation are necessary to keep the active young minds in the right channels and proper direction and encouragement can be given by volunteer welfare workers.

Educational measures such as special classes for mentally deficient and mentally backward children, special outdoor schools for tuberculous children, organizations such as the Big Sister Movement, the Little Mothers' League, etc., all have their fields of action but are all co-related to the one general idea of producing and maintaining healthy children. Most of our female colleges are offering a splendid course of instruction in music, economics and household science, but not enough instruction is given to girls to help them in taking their places in society as wives and mothers.

I have enumerated some of the essentials. How is the work to be carried out? This can be done most efficiently by some central body, such as a department of child hygiene working in close co-operation with all interested bodies. Pre-natal and well baby clinics, welfare and public health nurses should be closely associated under one central body and should work hand in hand so that there may be no paralleling of effort. In co-operation with these trained workers your Welfare organization can educate the public and raise funds for necessary expenditure. In your coming elections how many of your candidates have considered this question of sufficient interest to state their views on it? Have you ascertained what branch of the work at present needs your particular attention and support? Efficiency and unification of effort can only be attained by centralization and co-ordination. Have you a sufficient supply of trained municipal nurses? If not, who is to approach your Municipal Government to secure them?

Before closing I would like to discuss one branch of the work which interests me intensely. This is the proper absorption by the community of neglected infants and children. Mortality statistics of infant homes, creches and asylums, the world over do not provide pleasant reading. Even in the best conducted of such institutions the mortality is extremely high. Every child needs a home and home care. This is not always possible but how many more little ones could be made happy and healthy if they could be taken out of institutions and given a little mothering? I do not wish to cast any reflections on these very necessary and usually efficient institutions, but only wish to emphasize the fact that every child de-

velops better in its home surroundings. Is the general public aware that through advances in medical science assurance can be given, after examination, that an infant is free from tuberculosis, syphilis or gonorrhoeal infection? Mental tests can also be carried out so that the individual adopting or caring for a child may feel safe in taking such a child into their home and family life. In my opinion, given a healthy child, one can through proper environment eliminate to a great degree so-called parental instincts that are not desirable. The child will grow and develop physically and mentally in direct proportion to the care expended on its physical and mental training. A few years ago I was fortunate enough to be associated with a hospital in New York that had a boarding out Department in which nearly eight hundred babies were placed and provided for in foster homes. These children were first admitted to the hospital for physical examination and tests, then foster homes or homes of adoption were located. The infant is placed in a foster home only after a social report on the mother and her home. Every week the child is examined by a Social Service nurse from the hospital. In case of illness the woman must bring the child at once to the hospital. The baby is clothed from the hospital stores and the foster mother paid by funds provided by the hospital corporation. In cases where the mother nurses the baby in addition to her own, she receives additional recompense. In this way the little unfortunate receives home care under hospital and social care supervision. These foster mothers frequently become so attached to these infants that they request leave to adopt them. You would perhaps be surprised to learn that four of the wealthiest children in New York can be found in one home, foster children of a wealthy public spirited woman. How many of you are aware that to-day there are several little infants in the children's department of your own city hospital awaiting adoption? Can any more patriotic work be done?

Words fail to express the admiration one must have for the women who will take into their homes and hearts these helpless little atoms who appreciate and yearn for the necessities and advantages of life just to the same extent as do our own children in their comfortable homes. Providence never intended that any class of children should have a corner on health and happiness. Are we all doing our utmost to spread health and happiness broadcast to the children of British Columbia?

Could one suggest any better work for one of your local Associations than providing foster homes or foster parents for all such children that are admitted for this reason to the infants' depart-



ment of your hospital? Perhaps you are doing this now. If not, could it not be undertaken? Such a movement will need funds and will entail much personal sacrifice, but I am sure the Superintendent of the Infants' Hospital will give you her sympathetic support and hearty co-operation. This is not a mere lofty suggestion; it is a practical work that is being carried out from day to day. Those who undertake it will be recompensed by receiving the great blessing of the child's thankfulness and by the satisfaction that they are materially aiding in a good national undertaking.

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# Provincial Public Health Nursing in Manitoba

BY ELIZABETH RUSSELL, R.N., *Superintendent of Public Nurses,  
Province of Manitoba.*

**P**UBLIC Health Nursing in Manitoba is carried on in the city of Winnipeg by special groups of nurses under different organizations, both public and private, and outside of Winnipeg, throughout the Province, under the direct supervision of the Provincial Board of Health.

The Public Health Nurses of the Provincial Board of Health combine all the special fields of public health nursing, except Industrial Nursing.

Approximately half of the province is covered by 50 Public Health Nurses, who are responsible for one or more municipalities.

With regard to qualifications, the Provincial Board of Health has endeavoured to give public health training to nurses of the staff by annual lectures, and from one month to six weeks' field work according to previous experience, before being assigned to a district.

Inasmuch as this is the era of preventive medicine, the sphere of its activities should be where the forces of prevention can exercise their earliest, most potent, and most lasting influences, i.e., in the home and the school.

Where the child lives and forms its habits of body and mind, is the proper place, and childhood the fitting time to teach the habits of health. To bring to mothers the knowledge that children should live and grow to become healthy citizens; to teach the child when it has come to years of understanding, how to recognize the enemies of its child-life, and how to avoid them—these are our aims.

This, after all, just spells education. Recognizing this, the Board of Health of the Province determined to bring the needed education on this most important phase of nation-building, to every school, every home, and every child in Manitoba.

In 1916, we began and completed the experimental stage of this work with a staff of five nurses. The experiment has proved a great success, both in its discovery of the great need of such work, and in the warmth of its popular reception.



We have since increased our staff which now numbers 50. The number of nurses actually required to completely cover all sections of the Province would be about 80, and, it is our aim to have this number in the near future.

### PUBLIC HEALTH NURSING.

#### 1. *The Work of a Public Health Nurse.*

##### (a) *Pre-Natal and Post-natal Work.*

Instruction to Mothers—in the homes and at Child Welfare Stations. As the Public Health Nurse becomes known in her field and wins the confidence of the mothers, the prospective mother becomes very ready and anxious for advice. The instruction given includes:

(1) Hygiene of pregnancy and early infancy.

(2) Preparation for confinement. To urge:

(a) Complete physical examination as early in pregnancy as possible, to include examination of heart, lungs, abdomen and urine, and the taking of blood pressure.

(b) Internal examination and pelvic measurements before the seventh month in primipara.

(c) Examination of urine every four weeks during the early months, at least every two weeks after the sixth month.

(d) Necessity of arranging for adequate medical and nursing care during confinement.

(e) Birth registration.

(3) Value of breast feeding, stressing its importance during at least the first six months.

(4) Technique of nursing.

(5) Technique of bath, sleep, clothing and ventilation, and general care of the baby with demonstrations.

(6) Preparation and technique of artificial feeding.

(7) Dietary essentials and selection of food for infants and older children.

(8) Prevention of disease in children.

The names of babies whose births have been registered, are obtained regularly from the registrar of the municipality.

##### (b) *Child Welfare Work.*

(1) In the homes by advice and demonstration to mothers in care of children.

(2) At meetings of mothers.

(3) At Child Welfare Stations.

(4) By health exhibits.

(c) *Health Inspection in Schools.*

- (1) Individual examination.
- (2) Individual instruction to pupils.
- (3) Class room inspections.
- (4) Class room health talks.
- (5) Health crusades.

Purpose—1. To promote good health habits among the school pupils.

2. To spread knowledge concerning the cause and prevention of disease.

The Health Crusades help the school pupils to acquire health habits by introducing the play element into the study and practice of hygiene. Besides giving the pupils something to do and honours to earn, the approved system of learning health habits by doing them—is given practical application following the health talks. The Health Crusade is carried on by observing the Health Chores, and other detailed Health Rules which in the opinion of the nurse seem advisable.

(6) *Little Mother's Leagues.*

These classes are organized in all town and city schools for girls in eight grades. Special classes are formed for girls thirteen years and over, in the primary grades.

(7) *Nutrition Classes.*

Nutrition Classes are organized in schools where the Nurse can make frequent visits to conduct such classes. They are organized in groups of children according to development, who are found to be suffering from malnutrition. The co-operation of teachers, parents and the children is enlisted that each pupil may profit from the instruction and care given to increase his weight.

(8) Visits to homes to urge and assist in arrangements for having defects remedied.

(9) *Inspection of Schools for unsanitary conditions.*

(d) *Communicable Disease Work.*

(a) Discovering, reporting to the Health Officer, and instructing families where communicable disease exists, including tuberculosis. The Nurse, while in the home or district where communicable disease exists, gives such instruction to both the patient and the other members of the household as may be necessary for their care, safety and future welfare. Where venereal disease clinics are established, nurses are assigned to assist in carrying on the work of such clinics.

(b) *Tuberculosis Visiting.*



1. To discover undiagnosed and suspected cases of tuberculosis.
2. To instruct patients in the care and prevention of the spread of the disease.

3. To advise as to arrangements for sanatorium care when recommended by a physician.

4. To arrange for satisfactory care of patients when recommended to continue treatment at home, under the care of the physician.

- (a) By seeing that patients have proper amount and kind of food, fresh air, clothing, rest, and sanitary supplies for their prescribed routine.

- (b) To find out if their road to cure is blocked by household worries.

- (c) To encourage them in carrying out the routine treatment.

5. To follow up discharged cases from the sanatorium in order to prevent the breaking down of arrested cases.

6. To have a knowledge of all the available medical, institutional and social resources that can be used to prevent the development of new cases in families of the tuberculosis patient.

To keep under supervision any cases that are found to be active.

(c) Venereal Disease Nursing.

1. To attend clinics established for the treatment of venereal diseases.

2. To such follow up work in the homes and hospitals as may be necessary.

3. To work in conjunction with social agencies for the welfare of patients and the community.

- (d) Duties of Public Health Nurses in time of epidemic of communicable diseases is as follows:

1. To be responsible for teaching volunteer nurses.

2. To be responsible for nursing service either by:

- (a) Direct supervision in visiting nursing.

- (b) Direct such nursing activities from a central agency.

- (c) To co-ordinate activities in co-operation with other relief agencies.

To report all cases of suspected communicable diseases to the Health Officer, and according to the number of cases, each nurse decides whether or not she is able to cover the work of personal visiting of patients or to direct such nursing activities from a central station.

Wherever possible, the Public Health Nurses are expected to organize Home Nursing Classes for the untrained women of the community. In order to do this, the co-operation of the Women's Organizations, i.e., Women's Institutes, Women's Section of the Grain Growers, Local Council, and Local Red Cross Society are sought.

(e) *Nursing Care Given in Homes*—(1) To demonstrate. (2) In emergency. (3) In time of epidemic.

Duties of the Public Health Nurse include:

*To discover, correct or present* any insanitary or social conditions detrimental to the health and welfare of the community, and symptoms of disease and physical disability—in co-operation with parents, physicians, dentists, hospitals and municipal officers, and other welfare organizations.

*To educate* citizens and organizations of the community by lectures in Home Nursing, First Aid and other health topics, literature, exhibits and health conferences. Parents, by instruction and demonstration in the homes, emphasizing the prevention of disease and physical disability. Children, by school room talks, Little Mother's Leagues, First Aid Classes, Health Crusades and Nutrition Classes.

It would appear from the foregoing that the work of the Public Health Nurse is practically all educative in its character, actual bedside nursing being undertaken only in time of epidemic, in an emergency and to demonstrate nursing care to another member of the household.

Cases are, however, constantly being brought to our notice, which indicate the dire need of nurses in outlying districts, where there is no physician. To meet this need, a branch of Public Health Nursing has been organized called Public Service Nursing. At the present time the Manitoba Division of the Canadian Red Cross Society are financing this work, the Board of Health assuming the entire control and direction of the nursing staff. These nurses have the time to give help, especially to the mothers and children in those remote places who so greatly require it, and who suffer many hardships as the result of the lack of such attention.

#### PUBLIC SERVICE NURSING FOR DISTRICT WHERE MEDICAL SERVICE IS UNAVAILABLE.

The following schedule of activities is only a catalogue of things which a nurse so situated may properly do. The nurse shall care for the sick, and be prepared to handle emergencies whenever they



arise. When she is not caring for the sick, she may properly carry on educational work in the schools and community.

#### ACTIVITIES.

##### *a) Public Service Nursing.*

- (1) Answer all emergency calls.
- (2) Answer all night calls when escort is provided.
- (3) Home to home bedside nursing.
- (4) Assist or take charge of obstetrical cases as may be necessary.
- (5) First Aid surgical dressings and treatment to patients at Nurse's residence as may be deemed advisable.

##### *(b) Public Health Nursing.*

When there is no Health Officer.

- (1) Investigation of sources of all communicable diseases.
- (2) Take all throat cultures for release of diphtheria cases and carriers.
- (3) Assist in quarantine and supervision of communicable diseases.
- (4) Report to Superintendent of Public Health Nurses all cases of communicable diseases and insanitary conditions.
- (5) To make use of Provincial Board of Health Laboratory for bacterial analyses.
- (6) Where no Public Health Nurse is appointed, all of the duties of a Public Health Nurse.

When a Public Health Nurse is also working<sup>1</sup> in the community, co-operation to be affected to obtain the most satisfactory results.

Such co-operation is necessary to carry on work in:

- (a) Child Welfare.
- (b) Prevention of Communicable Diseases.
- (c) Instruction on Health Education, Home Nursing, and First Aid, Little Mother's Leagues, etc.

##### *(c) Social Service Work.*

To co-operate with and secure aid from Social Agencies, when medical social problems arise.

The radius of the districts which the nurse may be expected to cover is from 15 to 20 miles from nurse's residence.

#### 2. Area.

A Public Health Nurse works in one or more municipalities according to the number of school population, which is usually not more than one thousand pupils, and the area to be covered.

### 3. *Transportation.*

The progress of the nurse's work varies according to the facilities for transportation, that are provided for the nurse in rural district. The best results are obtained where the nurse has independent transportation.

The municipalities may arrange for either of the following means:

1. To arrange with each school board to provide and be responsible for the payment of transportation, for the nurse while in each school district.

2. To provide independent means of conveyance for the nurse, either by providing a horse and buggy, or a motor car. The Board of Health pays for the feeding and stabling of the horse, and pays for gas, oil, storage and minor repairs for a car.

### 4. *Cost.*

The cost to the Government of maintaining a nurse in a district is approximately \$2,000 yearly. This amount includes salary of the nurse, transportation expenses, First Aid supplies, and records used in connection with Inspection of School Children. It does not include permanent equipment used by the nurse in her work. Up to the present time the charge against a district employing a nurse, has been \$1,000 yearly, \$500 from the municipality and the same amount from the Joint School Board.

It has been found desirable, if possible, to arrange that the municipality assumes the payment for itself and the schools; and levy on the latter as needed, the Board of Health in the meantime paying the salary of the nurse, and sending in a bill and statement every three months to the municipality.

### 5. *The Appointment and Supervision of the Nurse.*

The Board of Health makes the appointment of the nurse, supervises her work and reserves the right to make such changes as may from time to time be advisable and necessary. The nurse keeps a daily report of work done which is sent weekly to the Superintendent of Nurses. All reports of the nurse's work are sent monthly from the Board of Health to the municipal council, school board or any other organization employing a Public Health Nurse.

### 6. *How a Public Health Nurse is Secured for a Municipality.*

The work of the Public Health Nursing Service needs only demonstration to show its benefit to a community. Therefore, the Board of Health sends a demonstrating nurse for a period of one to



two weeks, upon request. After such demonstration, the municipal council or school board resolves whether or not to employ a nurse.

If a decision is reached to inaugurate the Nursing Service, application is made to Dr. M. S. Fraser, Corresponding Secretary of the Provincial Board of Health, Winnipeg, thereupon a nurse is engaged and given such training as may be necessary to qualify her to carry on the work.

7. *The Qualifications of a Public Health Nurse.*

The Provincial Board of Health have passed the following regulations re qualifications of a Public Health Nurse and salary schedule which is to be in force on and after May 1st, 1920.

The initial requirements of all Public Health Nurses shall be:

(a) All applicants must be graduates of a recognized training school, which provided not less than a three years' course in surgical, medical and obstetrical nursing.

(b) Two years' High School or its equivalent.

(c) A registered nurse, or eligible for registration.

The applicant for appointment shall be on probation for three months before being transferred to the regular staff.

The applicant, after satisfactorily completing her probation term, shall receive appointment by Order-in-Council. Such Order-in-Council shall be a guarantee to the Board of Health that the nurse will remain on the staff for a period of at least nine months from date of appointment by Order-in-Council.

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# Social Background

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## Toronto Neighbourhood Workers' Association

REPORT FOR YEAR 1920-21.

### DIVISION OF FAMILY WELFARE.

A mere tabulation of statistics fails to give an adequate picture even of the work done, and rather ignores aims and ideals. This year, on account of the emergency employment work, it is especially difficult, as many families counted in the unemployment report were previously known to the organization, and some of them during the last year. In order to make a complete yearly report 75 have been listed in both reports. *The total number of families, excluding duplicates, is 3,547. The report of work done for unmarried mothers is given elsewhere.*

*In our regular work we were interested in 2,196 families in comparison with 1,408 last year.* For some of these we acted as a clearing house, and another agency assumed the supervision of the family. For many, however, the office assumed a larger measure of responsibility, and in some instances full responsibility. On the whole, most pleasant relations have existed between the district secretary and the co-operating agencies. In some of the districts where there are few social agencies, interested people have become excellent friendly visitors, and we feel specially indebted to these who have given their time so generously.

From the Department of Public Health, as in previous years, come the greater number of the families referred to us—almost 50%. There has been decided increase in personal applications. The nationalities represented show quite a cosmopolitan clientele though the proportion of foreigners is not large, and English and Canadian comprise almost two-thirds of the total.

It is always difficult to tabulate just what has been done for the family, but our long list of services rendered suggests that something has been done. *We have tried to show in dealing with a family situation that where relief was necessary, it was merely a symptom of some more deep-seated trouble, and have tried always to keep in mind that the family have a past, a present and a future.*



## FIELD WORK FOR STUDENT.

One of our pleasant experiences was the supervision of field work for social workers in training. Last summer the nurses from the Provincial Department of Health and Red Cross, who were being sent to different parts of the Province as Public Health Nurses, were with us for a short time. We had, also, the student nurses from the Victorian Order. We hope we were able to give them a better insight into our work, and we certainly learned much more about theirs, and this getting to know each other better is one of the ends to which we are constantly striving. From the Social Service Department of the University we had 23 students in all, 8 receiving their assignments from the Central Office and 15 in the district offices gaining experience in emergency work.

## INTER-CITY WORK.

One part of our work that possibly is not well known is what we call our out-of-town investigations. As a member of the American Association for Organizing Family Social Work, our name appears in the Directory of Family Social Work Societies, both as the correspondent for Toronto and the forwarding centre for Ontario. Last year we had ninety-five "out of town" enquiries. We also had many letters regarding correspondents in different places which are not counted except in the day's work. Thirty-two of these 95 were sent to other places for investigation. We have built up quite a list of correspondents. We appreciate very much the valuable assistance of Children's Aid Society agents, ministers and many other kind friends, who have made it possible for us to do this part of our work. (For the investigations in the city, we are asked to do many things—establish legal residence; verify birth, death and marriage certificates; meet trains; secure previous work records; endeavour to secure the co-operation of relatives in carrying out plans for a family; help trace deserting husbands, etc. This work is most interesting, and in many cases we have been able to render valuable service. It also makes us more willing to ask agencies in other cities to help us out with a like service.)

It seems impossible to speak about the last year's work without saying something of the strain under which the secretaries worked. The unemployment situation was most depressing to the social worker who is honestly endeavouring to work for a better social order. The unusual amount of work necessitated by the problems presented because of the thousands of people out of work, along with this weight of depression made the winter a very trying one.

## PROBLEMS PRESENTED.

Most of the families we met presented several problems awaiting a solution. Illness in some form was found in almost 33 per cent. of the total number of families, but was, this year, brought down from first place by unemployment which occurred in 50%. Desertion was in almost the same proportion as last year—giving 11% of the total. Insufficient income was a troublesome problem and was more in evidence this year. Mental cases, shiftlessness, begging, incompetency, both domestic and industrial, bad housing, all contributed their quota. The small number of families in which intemperance was listed is significant.

## SERVICES RENDERED.

The financial statement shows something of what has been done for the families referred to us. On the financial side, too, might be mentioned, extension of credit, employment obtained, and financial adjustments made so that the family was able to remain independent. There are, however, many other services rendered, either directly by us or by obtaining the co-operation of other agencies, and these are not so easily summarized. We arranged for physical treatment in 178 families and legal aid in 125. Institutional care was provided when this was necessary; children were placed or boarded; transportation was arranged; and family and church ties were strengthened.

Our work is non-denominational in character, but instead of it being said that we have no religion, it would be more nearly true to say that we embrace all religions. We are able to find a common footing in our efforts for the community, not only in breaking down the outward limitations that bind whole groups of men, but, also, in that further step, where we endeavour to set the individual free from inner limitations.

There have been many words of praise, and some attacks of criticism. Very often the criticism was just and this kind of criticism we crave. No one realizes her failures more keenly than the secretary who has experienced them. We trust that another winter will not be so strenuous, but the lessons learned during the last year, have, we hope, made us more able to meet any situation in which we may find ourselves.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF JUNE, 1921.

#### COMPARATIVE TABLE.

| Diseases.                       | 1921  |        | 1920  |        |
|---------------------------------|-------|--------|-------|--------|
|                                 | Cases | Deaths | Cases | Deaths |
| Small-pox .....                 | 170   | 2      | 349   | 0      |
| Scarlet Fever .....             | 289   | 6      | 371   | 12     |
| Diphtheria .....                | 371   | 20     | 342   | 45     |
| Measles .....                   | 390   | 2      | 3,613 | 22     |
| Whooping Cough .....            | 194   | 7      | 151   | 15     |
| Typhoid .....                   | 29    | 5      | 31    | 12     |
| Tuberculosis .....              | 220   | x105   | 220   | 184    |
| Infantile Paralysis .....       | ..... | .....  | 2     | 1      |
| Cerebro-Spinal Meningitis ..... | 9     | 9      | 9     | 9      |
| Influenza and Pneumonia .....   | 2     | 2      | 49    | 39     |
| Primary Pneumonia .....         | ..... | 126    | ..... | 260    |
|                                 | 1,674 | 284    | 5,137 | 599    |

x Only about 60 per cent. of the deaths from Tuberculosis are reported this month.

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

|                  | June<br>1921 | June<br>1920 |
|------------------|--------------|--------------|
|                  | Cases.       | Cases        |
| Syphilis .....   | 112          | 169          |
| Gonorrhoea ..... | 155          | 183          |
| Chancroid .....  | 3            | 4            |

The decrease is largely due to Hamilton failing to report for two weeks and Toronto for one week.

# SMALL-POX REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF JUNE, 1921.

| County.              | Municipality   | Cases | Deaths |
|----------------------|----------------|-------|--------|
| Algoma               | Nesterville    | 2     | 1      |
|                      | Korah          | 2     | ..     |
| Brant                | Brantford      | 2     | ..     |
| Bruce                | Paisley        | 1     | ..     |
| Carleton             | Ottawa         | 48    | ..     |
|                      | North Gower    | 1     | ..     |
|                      | Nepean         | 8     | ..     |
| Elgin                | St. Thomas     | 3     | ..     |
| Frontenac            | Kingston       | 1     | ..     |
| Grey                 | Owen Sound     | 9     | ..     |
| Halton               | Burlington     | 1     | 1      |
| Huron                | Goderich       | 1     | ..     |
| Kenora               | Kenora         | 1     | ..     |
| Lambton              | Brooke         | 8     | ..     |
| Lennox and Addington | Denbigh A & A  | 1     | ..     |
| Middlesex            | London         | 5     | ..     |
|                      | Westminster    | 2     | ..     |
| Nipissing            | Sturgeon Falls | 1     | ..     |
| Norfolk              | Windham        | 2     | ..     |
|                      | Charlotteville | 3     | ..     |
|                      | Simcoe         | 2     | ..     |
| North'd. and Durham  | Bowmanville    | 2     | ..     |
| Oxford               | South Norwich  | 8     | ..     |
| Peel                 | Albion         | 2     | ..     |
| Prescott and Russell | Vankleek Hill  | 2     | ..     |
| Prince Edward        | Hillier        | 5     | ..     |
| Simcoe               | Orillia        | 5     | ..     |
|                      | Alliston       | 1     | ..     |
| Sudbury              | Sudbury        | 5     | ..     |
| Timiskaming          | Haileybury     | 2     | ..     |
|                      | Dymond         | 1     | ..     |
| Victoria             | Ops            | 1     | ..     |
| Waterloo             | Kitchener      | 2     | ..     |
|                      | Galt           | 1     | ..     |
|                      | Waterloo Town  | 2     | ..     |
|                      | Waterloo Tp.   | 9     | ..     |



|                  |                    |       |       |
|------------------|--------------------|-------|-------|
| Wellington ..... | Guelph .....       | 1     | ...   |
|                  | Mount Forest ..... | 1     | ...   |
| Wentworth .....  | Hamilton .....     | 3     | ...   |
| York .....       | Toronto .....      | 8     | ...   |
|                  | Newmarket .....    | 3     | ...   |
|                  |                    | <hr/> | <hr/> |
|                  |                    | 170   | 2     |



## News Notes

Owing to the large number of accidents to children caused by automobiles, the Ontario Safety League is sending a copy of the excellent paper read by Principal Richardson of Park School, Toronto, at the recent safety convention to every teacher in the schools of Toronto for use when the schools re-open next month.

Principal Richardson, having pointed out the shocking loss of life due to carelessness, urges that a systematic course of study should be given in accident prevention, beginning with the kindergarten classes, so that there will be a gradual growth from individual safety at home, in school and on the street to a consciousness of safety in the community and the nation.

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The 1921 Session of the Canadian Conference on Public Welfare will be held in Montreal during the week of September 26th. On the 29th and 30th Sessions of the Canadian Conference on Child Welfare will be held.

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The Provincial Board of Health of Ontario will as usual have a valuable health exhibit at the Canadian National Exhibition commencing August 27th.

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Sir Claude Hill, K.C.S.I., C.I.E., has been appointed Secretary-General of the League of Red Cross Societies and has taken up his duties. Sir Claude Hill, who resigned from the Indian Civil Service in 1920, was head of the Central Transport and Food Board for India and member of the Viceroy's Executive Council. Among other Indian appointments the new Secretary General has held that of Deputy Secretary of the Foreign Department of the Government of India. He was also Chairman of the Indian Red Cross Society and is a Knight of Grace of the Order of St. John of Jerusalem.

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Dr. Gordon Bates, General Secretary of the Canadian National Council for Combating Venereal Diseases, on July 18th, spoke at a special meeting of the National Council for Combatting Venereal Diseases, held at Morley Hall, Hanover Square, London. Lord Emmott presided and the general topic of discussion was "work being



done in Canada in combating Venereal Diseases." Following the address there was an informal discussion of Canadian legislation for the control of Venereal Diseases and particularly of notification.

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Mrs. A. M. Huestis, Honorary Treasurer of the Canadian National Council for Combating Venereal Diseases, is in Europe and will probably remain for a year. During her stay Mrs. Huestis will represent the Canadian Council at meetings of the British organization. Dr. A. H. Desloges, who is in Europe for a shorter time will also act as a temporary member of the British Council representing the Canadian Council.

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An attractive pamphlet entitled "1910-1920—A Review of Ten Years' Progress" has just been published by Dr. J. W. S. McCullough, Chief Medical Officer of Health for Ontario. The pamphlet gives in detail the organization of the present Provincial Board of Health, and also contains an interesting account of the early history of public health in Upper and Lower Canada. The booklet also deals comprehensively with the recent advances made in Public Health work in the province, and contrasts the up-to-date methods of today with those of ten years ago. A detailed review of the booklet will be published in the next issue of the Public Health Journal.

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Plans are already under way for the 1922 Annual meeting of the Canadian Public Health Association to be held at St. John, New Brunswick. The Hon. Dr. Roberts, Minister of Health for New Brunswick, has promised that the meeting will be even more successful and instructive than the excellent meeting of 1921, held in Toronto last May. It is not too early to make arrangements to attend this convention.

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Dr. John W. Shaw, Clinton, Ont., was elected President of the Ontario Health Officers' Association, and Dr. J. J. Middleton, Director, Division of Public Health Education, Provincial Board of Health, Secretary at the Annual Meeting held in Toronto last May.

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# Editorial

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## PUBLIC HEALTH NURSING.

**I**NCLUDED in the present issue is a paper by Miss Elizabeth Russell on "Public Health Nursing in Manitoba." Aside altogether from the care which has been taken in working out the details of this paper it is of great interest in that to one unused to public health activities, and indeed even to a public health specialist interested in a particular field only it must provide great food for thought.

This full description of work carried on in Manitoba gives one some idea of the tremendous expansion of public health activities in recent years as well as the wider interpretation given to public health. The public health nurse, able and vigorous lieutenant in the health forces of the country, is doing magnificent work. Her career, arduous at times perhaps, often beset with the troubles and perplexities incident to all pioneer work is yet of such a character that it provides both satisfaction and inspiration, qualities too often lacking in the ordinary humdrum occupation of making a living. The time gradually approaches when humanity will be elevated above other human aims, when the worker who strives to make health and happiness the lot of all rather than the few will receive all honour. And high in the "honour roll" will be the public health nurse.

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## THE PHYSICIAN IN PARLIAMENT.

Truly the old order changeth but slowly, and despite the declaiming of H. G. Wells and other more or less astute objectors the lawyer continues to retain his traditional prestige in most of the parliaments of the world. The reason is, perhaps, not hard to find. His knowledge of laws, his experience in public affairs and the strategy of the court room, his superior general education are all factors in his success in obtaining and keeping his legislative position. Yet in spite of all, too many lawyers, law making, has decided



disadvantages. Likewise too many farmers some of our erstwhile politicians may retort with equal justice.

A legislative assembly should represent as far as possible all classes of society and all shades of opinion if legislative progress and reform are to progress surely and with sanity. The doctor, the lawyer, the educator, the merchant, the clergyman, the laborer, the manufacturer and all the rest of them should have a voice—and our educational system should be so planned that each citizen coming to the time of his full citizenship should feel that the highest honor and the fullest opportunity may lie for him in the legislative halls of his country.

There have been physicians in most legislative assemblies. Some have attained eminence. In Canada names such as that of the elder Baldwin, Tupper and other lesser lights some of whom have won cabinet rank, will be readily called to mind while in other countries Clemenceau in France, and Jamieson in South Africa, are examples of physicians who have climbed the political ladder to fame. On the whole, such have been men in whom professional acumen has had little relation to political success. Politics and medicine it has often been said don't mix and more's the pity, many a good doctor has met his double Waterloo attempting to prove the falsity of this trite axiom. Many too have forsaken the one field for the other with varying success.

But to-day is the day of public health and with the problems of this new science are closely interwoven problems involved in the fight for sane legislation dealing not only with laws for the direct control of communicable disease, but many other laws making for the general welfare of the people. The present Minister of Education for Great Britain, speaking in Toronto a few years ago, paid some attention to the opportunities in public life for the economist with medical education. Irving Fisher, his namesake at Yale, an economist without specific medical education has, in spite of this lack, performed outstanding service in the public health field. Whether the old type of medical education alone would have made him an even more efficient citizen is perhaps questionable. It would perhaps have served to accentuate his present point of view.

The physician coming daily in contact with the physical ills of humanity should develop a valuable point of view from that contact alone, and as the science of prevention develops should incline more and more to desire both to utilize his knowledge of the necessity for preventing disease and the means of organizing and using preventive machinery. This should mean the entrance of the

physician into parliament filled with the desire to work and fight for measures concerning health. Then demonstrations such as that supplied by the present energetic President of the Canadian Public Health Association as Minister of Health in New Brunswick should be fairly common. Yes, the mills of the gods grind slowly. In time their product is exceeding fine; and not the least of their products is the modern socially minded physician. Here's hoping that more of him may be found in the legislative halls of the future.

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## Notes on Current Literature

### *Which Way are we Going in Nursing?*

The education of the nurses of the present and the standards and number of nurses of the future are matters of practical concern to all classes in the community. This article discusses the value of short courses in nursing. The author believes that the group reached by these courses should be called "Attendants" and not "Nurses," and that the duties and responsibilities undertaken by these "Attendants" should be restricted. (*The Survey*, June 18th, 1921, p. 409.)

### *Vitamines and Public Health.*

Dr. Drummond, of the Department of Physiological Chemistry, University of London, England, warns against the commercial exploitation of vitamins. If people would recognize the real situation and eat more fresh vegetables, fruits, eggs and milk, they need not under ordinary circumstances, purchase expensive and possibly inefficient proprietary articles, nor worry about vitamins. Natural sources for these products abound on every hand. (*The American Journ. of Pub. Health*, July, 1921, page 593.)

### *Vitamines as Factors in Public Health.*

Vitamins are now well recognized as a public health problem. This article reviews the present knowledge of the nature and function of these important food elements. (*The Nation's Health*, June, 1921, page 353.)

### *Public Health Problems in Europe.*

(*Nation's Health*, June 15th, 1921, page 329.)

### *Economic Problems in European Health.*

(*Nation's Health*, July 15th, 1921, page 398.)

### *Housing as it Relates to Public Health.*

(*The Nation's Health*, July, 1921, page 395.)

### *The Nurse in Relation to Child Conservation.*

(*Mother and Child*, July, 1921, page 309.)

### *Physical Defects of Children of Pre-School Age.*

(*Mother and Child*, June, 1921, page 248.)

### *Planning the Child Health Station.*

(*Mother and Child*, June, 1921, page 224.)

*Important Facts in Building Tuberculosis Sanatoria.**(United States Pub. Health Reports, June, 1921, page 1371.)**Finding Tuberculosis Through Clinics.**(American Journal of Public Health, July, 1921, page 622.)**Mental Hygiene in Canada.*

1. Nova Scotia Survey.
2. Montreal School Survey.
3. Vancouver Sub-normal Problem.

*(Canadian Journ. of Mental Hygiene, April, 1921, pages, 1, 49 and 117.)*

## CANADIAN RED CROSS SOCIETY PUBLICATIONS.

1. "The Junior Red Cross" (Saskatchewan), June, 1921.
2. "The Membership Enrollment Campaign." (*The Public Health Journal*, May, 1921, p. 225.)
3. "Red Cross Health Centre"—pamphlet—Alberta Division.
4. The Shortage of Student Nurses.

## LEAGUE OF RED CROSS SOCIETIES POPULAR HEALTH ARTICLES.

1. "Healthy Holiday Journeys."
2. "Dried Milk."
3. "Is 'Dip' Doomed?"

A *Syphilitic Manifestation in the Nose*. Harold M. Hays, M.D.  
*American Medical Association Journal*, Vol. 76, No. 23 June 4, 1921.

The engorged mucous membranes, covering the turbinates and the nasal septum, if such mucous membrane is not distinctly poly-poid, will invariably shrink under the application of a 1 per cent. cocaine solution, to which is added a third part of a 1.1000 solution of epinephrin chlorid. If the mucous membranes do not shrink perceptibly under the application of such a solution there is in all probability a syphilitic infiltration of the mucosa. The nasal mucosa is first sprayed with the solution after which pledgets of cotton immersed in the medicament are inserted into the nose. These are removed in from five to ten minutes. If the mucosa still obstructs the nose, it is evident that there is some pathologic condition of this membrane which will not allow it to shrink, probably a syphilitic infiltration.



The author reported two cases. His concluding comments were:

A Wasserman test should be made in all cases of nasal obstruction in which the obstruction is due to a thickened mucous membrane which will not shrink under the application of cocain and epinephrin.

*Report of the Chief Medical Officer of the Board of Education  
(Great Britain) for 1919.*

Sir George Newman records a great national achievement in the betterment of children's health. Those who are working in this field in Canada can learn much of the thorough British way in which the problem is being attacked from every angle. The report is in eleven sections; those dealing with Special Schools for Defective Children, the Science of a Healthy Life and Physical Education will probably be of most interest. The suggested arrangements for the care of children who leave school to work, indicate how thoroughly in earnest are the school authorities of Great Britain to ensure national good health.—S. B. McCready.

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## Book Reviews

*Hygiene, Dental and General.* By Clair Elsmere Turner. St. Louis, C. V. Mosby Co., 1920. MacAinsh & Co., Toronto. Cloth, pp. 400, \$4.00.

The rapid advances in the field of hygiene and the consequent effect on personal and community health, give to the study of this subject an importance that compels a need for accurate and up-to-date books. Professor Turner's book helps to meet this need and presents the subject in a manner suited to the requirements of students and practitioners of dentistry.

This book is essentially one of general hygiene as seen through the eyes of a dentist, but, in view of the importance of dental hygiene, this rather enhances the value of the publication to the sister professions of medicine and nursing and to those interested in school and industrial hygiene.

The first five chapters deal with physiology and relative problems such as feeble-mindedness, sex hygiene and prenatal care. The problems arising through infectious organisms are treated in the following eleven chapters. The author takes a view of these problems sufficiently wide to include public health administration, food control and the hygiene of schools and industrial plants. Professor Turner does not hesitate to quote at length from the excellent reports of the Children's Bureau of the United States Department of Labour, the pamphlets of the United States Public Health Service and of the Sanitary Engineering Section of the American Public Health Association. The incorporation of Ehrlich's side-chain theory adds to the value of the book, but a chapter dealing with insect-borne diseases and their control might well have been included in view of the importance of this subject and the romance of recent accomplishments in this branch of hygiene. The section on Essential Facts of Immunity might have been made more comprehensive if the types of experiments on which the conclusions are based, were mentioned.

The appendices deal with the control of communicable diseases and with disinfection and disinfectants.

The plan of the book is comprehensive, the facts are accurate and the style concise and readable.—Donald T. Fraser.



*Practical Preventive Medicine.* By Mark F. Boyd, M.D., M.S., C.P.H. Philadelphia, W. B. Saunders Co., 1920. J. F. Hartz Co., Toronto. Cloth, 352 pages, \$4.50.

During the past few years there have been many valuable text books published on Preventive Medicine and Hygiene, which are of the greatest value to the professional worker in public health and to the post-graduate student. These volumes are large and do not appeal to the general practitioner, and are too expensive for the average student. These points have been realized by Professor Boyd who has endeavoured to present briefly and attractively this subject to practitioners and medical students. The book is of convenient size, containing 352 pages, with over a hundred illustrations.

The arrangement of the subject matter is excellent. In an introductory chapter, the subject is defined and the importance of "Preventable Diseases" is emphasized. Discussion of Communicable Diseases, of Deficiency Diseases and of Diseases due to Occupation naturally follows. Each of these groups of diseases is dealt with in a section, consisting of a series of chapters.

The first section dealing with Communicable Diseases presents in terse form the accepted facts regarding these diseases, grouping them according to their mode of transmission, and detailing methods of control. This section is concluded by an outline of general measures of disease control, with details of disinfection, excreta disposal, water purification and pasteurization of milk. References to publications are given at the end of each chapter which are of great value to the reader desiring further information.

Infant and Maternal Mortality is presented in a striking manner by diagrams and charts. The section on Vital Statistics is clear and concise with numerous illustrations which assist in simplifying this subject. A chapter on Public Health Administration in the United States, outlining briefly the Federal, State and Local Government agencies forms a logical conclusion to this eminently practical and valuable book.—R. D. Defries.

*Synopsis of Hygiene.* By Jameson and Marchmont. Philadelphia, P. Blakiston's Son & Co., 1921. Cloth, pp. 404. \$4.00.

This book is one of the "Students' Synopsis Series," being specially intended for those studying for a diploma in Public Health in Great Britain. In the preface the authors point out that "those sections dealing with purely practical subjects, have been cut down

to make room for more theoretical material." The book consists of about 400 pages in 11 sections.

Communicable diseases and methods for their control are barely dealt with and are included in one section with Industrial Diseases, Notes on Animal Parasites, Hospitals and Disinfection. In contrast, Sanitary Law (England and Wales) is discussed in a section of greater length (60 pages) giving in detail the Ministry of Health Act, 1919. Similarly a large section is devoted to notes on Meteorology, Physics, Chemistry, with definitions, methods and computations.

Undoubtedly the book is one of great value to the student preparing for the diploma of Public Health examination in England.  
—R. D. Defries.

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# The Public Health Journal

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VOL. XII.

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No. 9

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## Essential Factors in a Campaign Against Venereal Diseases

BY DR. GORDON BATES.

Read at the Annual Meeting of the Canadian Public Health Association,  
Toronto, May 16th, 1921.

**I**N Discussing essential factors in a campaign against Venereal Diseases one should first of all recall some of the facts of the situation as it is.

First of all the incidence and dangers of Gonorrhoea and Syphilis.

The Report of the British Royal Commission handed in in 1916 was to the effect.

"That the number of persons who have been infected with Syphilis, acquired or congenital, cannot fall below 10 per cent. of the whole population in the large cities, and the percentage affected with Gonorrhoea must greatly exceed this proportion." (If this conclusion be correct, it implies 450,000 syphilitic persons in London; and, inasmuch as the mortality figures of Syphilis for the whole Kingdom amount to 6.6 times that of London, it suggested that there must be three million syphilitics in the Kingdom.)

"General paralysis of the insane is responsible for 15 per cent. of male admissions to asylums of large cities."

"It is estimated that 90 per cent. of all cases of aneurysm are due to Syphilis."

"Syphilis is variously estimated to account for 7 per cent. to 35 per cent. of 'congenital deafness.'"

"Of 1,100 children in blind schools one-third of the cases were due to Syphilis. Of the same 1,100 cases, 24.35 per cent. were the result of Gonorrhoea ophthalmia. In this investigation between 55 and 59 per cent. of cases investigated owed their blindness to Venereal Diseases."

"The cost of educating a deaf child is stated to be ten times that

of an ordinary child while that of educating a blind child is seven times that of educating a normal child."

In reference to Gonorrhoea the Commission stated, "If the results are serious for men, they are worse for women. It leads more commonly to sterility, various operations, invalidism and death. The infection in women is peculiarly tenacious and difficult to cure, when once firmly established."

"Of sterility in females Gonorrhoea is responsible for about one-half of that which occurs from all causes."

In reference to effects of Syphilis on the offspring, the Commission states "Hereditary syphilis is in some ways more serious than in the acquired form, since it here attacks developing structures; it is a very frequent cause of abortion, miscarriage, and still-births. Thus, in one series of cases, out of 1,001 pregnancies in 150 families where syphilis existed, there occurred 172 miscarriages or still-births and 229 infant deaths; while of the 600 live children 390 were diseased."

The following Canadian statistics are of value:

Routine Wassermann reactions in Toronto General Hospital in 1917 showed that 12 per cent. of the Ward patients admitted for ordinary complaints to be suffering from Syphilis.

In 1918 routine Wassermann reactions in Montreal General Hospital showed that 25 per cent. of the patients were suffering from Syphilis.

Routine Wassermann reactions in a regiment of draftees in 1918 after all cases of known or obvious had been withdrawn showed 5.7 per cent. of the men gave a positive test.

In a Canadian reformatory for women in 1920, 33 per cent. of the women inmates were found to have Syphilis and 80 per cent. to have Gonorrhoea.

Sir William Osler made the statement that Syphilis is the greatest killing diseases. This means that as a cause of death Syphilis outranks tuberculosis, pneumonia and cancer, three other greatest killers. It is also to be noted that in this estimate of comparative mortality Gonorrhoea is not included.

These statistics picture a serious condition of affairs. In view of the fact that at the time they were compiled Venereal Diseases were not reportable in either Canada or Great Britain and also of our war experience as compared to that of other countries there is little reason to suppose that our state is better than that of any neighboring countries. The medical situation may be summed up in the statement that we have an enormous number of infected and



infective individuals who should be brought under treatment at once. This suggests the provision of machinery whereby such persons may be persuaded forcibly or otherwise of the necessity for treatment and also the provision of treatment facilities. How this may be done and has been done will be described later.

In addition to the purely medical aspects of the problem, however, there are other factors involved in the spread of Venereal Diseases throughout the world. These factors are intricate and complex. Most of them are absent in the case of all other diseases. In any campaign against Venereal Diseases which aims to do more than scratch the surface of the problem they must be duly recognized. Such problems—moral and social in character have their origin in the fact that Venereal Diseases have added to their characteristics as communicable diseases the fact that they originate in the sex organs and that sexual immorality is a great factor in their spread. This means that while the physician has a commanding position in the campaign against Venereal Diseases, if he relies only upon the ordinary police power of the usual communicable disease legislation little will be accomplished. The magistrate, the teacher, the clergyman, the lawyer, the biologist, the social worker—all have their part in the campaign. After all the final object of such a campaign must be Social Hygiene—the provision of normalities of life for the average individual in the community—much more than a medical problem. It is a problem the solution of which, indeed, has never before been even attempted. Any real advance in the direction of its solution must, of course, mean painstaking and thoroughgoing organizing work.

The situation so far as Venereal Diseases are concerned may be summarized in two statements as follows:

1. There are a large number of infected and infective persons, a large proportion of them ignorant of their condition. These persons both for their own sakes and the sake of others whom they may infect should be educated and persuaded to take treatment.
2. The large proportion of the population is uninfected. Many more may become infected unless preventive steps are taken. This resolves itself largely in a problem having to do with the care and education of young persons.

#### CLASS I.—INFECTED INDIVIDUALS.

(1) *Treatment.*—For the care of infected persons there are provided first the private physician, secondly the clinic. Clinics are now in operation in most of the provinces of Canada.

Clinics in Ontario and in the other provinces are in operation by virtue of a joint grant by the Dominion and Provincial Governments. The Provincial Government through the Provincial Board of Health is in general control of the provincial campaign against Venereal Diseases and supervises the operation of the Ontario Act for the prevention of Venereal Diseases and the operation of the clinics; and as well undertakes the treatment of Venereal Diseases in Provincial jails and reformatories. In Ontario to date 11 clinics for the free treatment of Venereal Diseases have been established.

It is perhaps desirable to note here the absolute necessity of organized support in the campaign on the part of the physicians of the province. One practical method by which support might be given is in the prompt reporting of Venereal Disease cases. Undoubtedly the number of cases reported by number to date is a small fraction of the actual number under treatment. A decided increase in the number of cases reported would clearly indicate not only a greater interest in the public health aspects of the whole question—but an increase in the efficiency of the machinery of the Venereal Diseases Prevention Act.

Every physician should realize too that in addition to reporting cases by number it is a definite duty to educate his patient in the seriousness of his disease and in the great necessity of continuing treatment until cured. Where treatment is discontinued too early and without adequate reason the machinery of the Act should be invoked and the case reported by name.

It is also important that the physician should realize the social ramifications of the Venereal Disease problem and undertake some investigation in this direction. This is particularly desirable in Venereal Disease clinics where the physician has every opportunity to render community service quite as valuable as that which he gives in contributing scientific treatment of the Venereal Disease case. The questioning of male patients by means of the social case sheet should be undertaken by the male physician. If he will only realize the great importance of such a duty as a part of the campaign for the elimination of Venereal Diseases from the community he will undertake it with enthusiasm.

#### *(b) Education.*

Education for the benefit of infected persons has been undertaken by Governments in various provinces and by the Canadian National Council for Combating Venereal Diseases. By the use of newspaper advertisements, moving-pictures, such as *THE END OF*



THE ROAD, lectures given before various groups of the population and the distribution of literature, infected persons or persons who have exposed themselves to infection may be informed of the necessity for undertaking treatment at the earliest possible moment.

*(c) Value of Social Service Department.*

The Social Service Department of a Venereal Disease Clinic is extremely important and through this department the clinic may become a much more valuable unit in the general campaign against venereal disease. One of the useful functions of this department is education of the patient in order that he may see the importance of continuing his treatment and in order that he may not be a menace to other people. This may be accomplished in various ways. For instance, educational material in the form of pamphlets or cards should be placed in the hands of every patient. The matter of using good educational posters in clinics is also worthy of consideration.

Follow-up work in the cases of patients who neglect treatment is important. Patients may in some cases be persuaded to resume treatment by means of appropriate letters. In other cases it may be necessary to follow patients to their homes. The fact should be emphasized, however, that the better the educational work carried on in the clinic the less follow-up should be necessary. Where personal follow-up work is necessary, the greatest tact is desirable when questioning is necessary at a patient's own home. It is perhaps scarcely necessary to mention in passing the fact that a well organized card index system is essential if social service department is to keep track of patients visiting the clinic and of visits missed.

*(d) Value of the Social Case Sheet.*

The all-America Conference on Venereal Diseases held in Washington in December, 1920, passed a certain resolution as to the value of the social case sheet. These stated that information gathered by means of the social case sheet may be utilized for the following purposes:

- (a) Follow-up work.
- (b) Tracing source of infection.
- (c) Tracing contacts.
- (d) Estimating the value of educational methods in vogue as a part of the local campaign.
- (e) Demonstrating economic loss to various industrial and other units in the community.

- (f) Demonstrating the social needs of the community; e.g., recreational needs, adequate supply of supervised boarding-houses, improved industrial conditions, etc.
- (g) Demonstration of distribution of infections.
- (h) Demonstrating type of prostitution, extent of solicitation, etc.
- (i) Demonstrating medical and social results of venereal diseases.

The above summary of types of information which may be gathered by means of the social case sheet gives one a fair conception of its value and it is important that in utilizing this document in investigating Venereal Disease cases the fact be borne in mind that the information obtained from each case is of definite value not only in so far as the case being investigated is concerned, but for the community.

It is important that the name and address of the source of infection be obtained in order that steps may be taken to find that person and put him or her under treatment—using the legal machinery provided under legislation for the prevention of Venereal Diseases if necessary.

It is also important that any contacts or persons who may have been exposed to infection from the patient be discovered and their case be investigated. One should find out whether such persons are actually infected. If infected they should be persuaded to take treatment. The social case sheet may also be used for investigation of various problems which have to do with Venereal Diseases. Through it one may find out, for instance, in what parts of the country a great deal of infection exists. One may investigate the relation of lack of recreation to immorality, one may estimate the amount of prostitution going on in a city, one may ascertain the existence of houses of prostitution or houses of assignation in a particular area or discover the necessity for better lighting in parks. As a matter of fact through the judicious use of the social case sheet one may arrive at a valuable conception of the problem of immorality, prostitution and Venereal Diseases in any community.

All of the above means that every venereal case should be investigated by means of the social case sheet and that in every investigation there be the utmost accuracy. Generally speaking a male physician should question male patients—the social worker female patients.

By the use of a similar type of investigation among individuals



brought up in police courts or imprisoned in jails or reformatories for the sex offences, one may arrive at an idea as to whether legislation is adequate and as to whether the idea of the legal authorities is merely punishment of the individual or prevention.

*(a) Education of Children.*

One of the greatest factors in producing the immorality which is at the back of the Venereal Disease problem is the fact that generally speaking children are allowed to grow up in absolute ignorance of matters of sex and as to the necessity for living a decent moral life. This is very largely due to the fact that parents are uneducated on these matters and unable to educate their children. It is not implied in advocating the teaching of the biology of sex that this alone will provide anything like an adequate protection of young people. It is necessary, however, that children be given some idea of the great purpose of nature and be taught a definite respect for the sex function. Part of such teaching should be definite instruction in citizenship and the stimulation of a spirit of chivalry and idealism which can easily be brought to the surface in any child by carefully planned educational measures.

The method by which such information should be given to children has long been a subject of controversy. It is now generally agreed that the parent is the proper person to teach children such matters. This has resulted in the adoption by the British National Council for Combating Venereal Diseases of a plan for teaching classes of parents in schools in order that they in turn may undertake to teach their children. The moving-picture may be utilized for this purpose and there are already a number of useful films on the market. One entitled HOW LIFE BEGINS is very good. In imparting information to classes of parents it is important that if possible the general matter of the prevention of Venereal Diseases in its broader aspects as outlined below be brought to their attention with special reference to the supervision and general care of children as well as their education.

The desirability of normal healthy recreation for all children is a matter upon which special emphasis should be laid.

*(b) Adults.*

It is important that the adult population should have information on the Venereal Disease problem both on its seriousness and on methods which may be undertaken for preventing Venereal Diseases. Such education is important because it means the formation

of public opinion and the public only arrive at a clear cut opinion when clear cut facts are placed before them.

#### THE DOUBLE STANDARD OF MORALITY.

It is an undoubted fact that society in the past has been prone to visit vengeance on the immoral woman and at the same time excuse moral lapses in the male. This means that a condition of affairs has existed which is not only unfair, but actually conducive to immorality. If sexual offences are wrong in woman they are equally wrong in man and if punishment is to be meted out for such offences it should be shared by all offenders regardless of sex. The prostitute is frequently roughly treated by the legal authorities. The jail and reformatory are considered necessary for her reclamation. At the same time her male companion—equally guilty—goes free. The same conditions obtain in the drawing-room. Too commonly the man of loose morals is welcomed as at least little worse than his fellow who has maintained the highest moral standard. At the same time the woman of easy virtue is shunned. All of this represents a state of opinion which is unhealthy and productive of very bad results. Until people generally come to believe in the single standard of morals progress towards the final elimination of Venereal Diseases from the community will be seriously impeded.

One of the outstanding causes for the existence of immorality and Venereal Disease is late marriage. Marriage is commonly postponed because of economic and social conditions which would seem to make reasonably early marriage impossible. The public should be educated on this matter and the dangers of late marriage explained to them. The economic and social conditions which make for late marriage are definitely remediable. Only an educated public opinion will remedy them.

Another important cause of immorality is the lack of opportunity for healthy recreation. This applies to both children and adults. There would seem to be many possible methods by which existing conditions could be remedied. The schools are, as a rule, for instance, not in use at night. Their utilization after school hours for dramatic entertainments, folk dancing, debates, etc., would be a means whereby children might be under supervision at a period of the day during which many of them may otherwise receive impressions of a dangerous character from associates of a type which are always too frequent. The utilization of church buildings for dancing by young people would mean that young people could indulge in a perfectly innocent and proper pastime



under proper conditions. The general stimulation of all forms of outdoor recreation and sport is also important.

Side by side with problems involving the provision of more recreation is that of supervising existing forms of recreation. Undoubtedly, the unsupervised dance hall is frequently a focus of immorality. This is not due to the fact that dancing is improper but to the fact that the dance hall is used for more than its legitimate purpose. If proper supervision is undetracted there is no reason why a dance hall should be used as a pick-up place nor is there any reason for improper types of dancing.

Housing conditions have a good deal to do with the existence of vice in any community. The crowding of several families into a house intended for one family produces conditions which do not make for normal family life, nor for morality. Again, lack of supervision of boarding-houses may result in dangerous developments. Unfortunately all boarding house keepers are not scrupulous and the use of boarding houses as houses of assignation is fairly common as a result. Licensing of boarding houses on condition that they live up to certain requirements would be a valuable step in advance. One requirement should be the provision of a common room where roomers may receive their guests. The lack of such provision and the receiving of guests in bed-rooms is a frequent cause of trouble. In large boarding houses for young men or young women definite provision should be made for recreational facilities and for proper entertainment for guests of both sexes.

In public discussion of the general subject it is necessary that great emphasis should be put on the function of the family as the most important social unit. If a member of a family breaks away from normal family associations and leaves home it is necessary that the community should recognize the fact that such person away from parental supervision and family care should have special attention on the part of the community. Such persons multiplied many times in the thousands of young people away from home in large cities make it necessary that we should pay special attention to all matters making for their welfare.

I have touched upon the work being undertaken by Dominion and Provincial Governments in which they receive the co-operation of municipalities and hospitals. I should, perhaps, have said something about legislation—existing legislation and its desirability. In Ontario, as you know, we not only have free treatment, but by virtue of our legislation we are able to compel treatment. This is a decided step in advance—various provisions of the Act having

to do with the preventing of advertising of quack remedies—preventing treatment by other than qualified physicians—compelling hospitals to provide treatment, etc. I need not go into this at this time. I would like to say a word, however, as to the desirability of enlisting voluntary aid.

It has been proved not only in the campaign against Venereal Diseases, but in many other campaigns that a voluntary organization can render great assistance to Governments and can undertake pioneer work of a character such as any Government will hesitate to attempt. The pioneer work of the American Social Hygiene Association and the British National Council for Combating Venereal Diseases are outstanding examples.

This fact was recognized by the Dominion Government in 1919 when at a conference called in Ottawa by the Government in 1919 the Canadian National Council for Combating Venereal Diseases was formed.

The Canadian National Council for Combating Venereal Diseases is a Dominion-wide voluntary organization with branches in all of the provinces and in many of the cities. Its function is to enlist voluntary support in order that the Government treatment scheme may be effective and also to utilize such voluntary support in order that new pioneer work will be done which will result in those things being undertaken which will lead to the final elimination of Venereal Diseases from the community. It is not proposed that the Council should usurp any Government function or do any work which can now be undertaken more efficiently by government or municipality. The Council will undertake new types of education and new types of investigation. Facts, social or otherwise ascertained by investigation will be turned over to the proper Government or other agencies in order that constructive action may ensue. Such action may have to do, for example, with education of the young, treatment of Venereal Diseases, approved police court methods, better supervision of boarding-houses, the organization and stimulation of recreation, both for the young and adults and the care of young people, particularly those who have been removed from the normal restraints of family life at home. Much hitherto unavailable information showing the urgent necessity for new types of community organization may be obtained by the questioning of patients attending Venereal Disease Clinics, utilizing the social case sheet for this purpose.

An example of educational work already undertaken has been the showing of **THE END OF THE ROAD** throughout Canada.



This has had two results. It has driven many patients in to take treatment at the clinics established in the various provinces, and it has interested citizens generally in the broader aspects of the Venereal Disease problem. A good deal of literature has also been distributed.

It has been found necessary where local branches of the Council have been formed to proceed with the organization of sub-committees of the main local executive committees, each charged with specific duties. Examples of these are as follows:

*A Committee of Speakers.*—The speakers acting on this committee are utilized to spread information on the various aspects of the subject to numerous types of audiences, in stores and factories, before various clubs, etc. One type of lecture proposed which will doubtless be of value is a lecture to parents in schools, in order that parents may be impressed with the necessity for proper supervision and education for their children.

*A Social Aspects Committee.*—This committee has to do with getting together workers on various social phases of the question in order that their advice and counsel may be made available. It is hoped that the secretary of this committee will undertake investigations in police courts and jails. At the same time recommendations will be made through the Executive to various local authorities on various matters, e.g., better supervision of dance halls, better policing of streets, licensing and supervision of boarding houses, etc., etc.

*A Medical Committee.*—This committee should consist of all local physicians working on any phase of the Venereal Disease problem. The Medical Committee advises the local executive on all purely medical aspects of the question. The committee should be of value to its own members, the Council, the clinics, etc.

*A Nurses' Committee.*—A Nurses Committee should have a similar value but deals only with phases of interest to the nurse.

*A Committee of Clergymen* representative of all denominations has been formed in Toronto. This committee discusses the co-operation which may be rendered by the church in the anti-venereal campaign. Such a committee should be of great value in co-ordinating work among the various denominations and in helping initiate new activities of a constructive character in the local churches.

*A Publicity and Propaganda Committee* is of value in advising on forms of publicity to be used, e.g., posters, newspaper pub-

licity, moving-pictures. This committee should be composed of members who have had experience in publicity work.

In a brief paper such as this it has been impossible to more than touch on many important matters. Such are—the type of teaching for various sections of the population, adults, parents, adolescents, etc., the possibilities in the co-operation of the church in the direction of either teaching or organized recreation, the desirability of persuading Board of Education that the opening of school buildings at night for folk-dancing, dramatic work, etc., is desirable and the necessity for a direct attack on the prevailing custom of late marriage.

The discussion of these questions must be postponed until a later occasion.

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# The Relation of Child Labour to Child Health

ARTHUR BUTLER CHANDLER, M.D., *Montreal.*

THE Child Labour Movement is part of the great conservation undertaking known as child welfare, and from an historical point of view it long antedates any other child legislation. Early in the last century the first laws in this connection were passed in England, owing to the exposure of frightful conditions in some of the industries. These laws have been gradually improved since then. The modern child welfare movement, dating back as it does for approximately forty years, and starting by an attempt in France to reduce the infantile mortality rate, has done much to assist those who are trying to minimize child labour.

The cause for the backwardness in child welfare work in this province is not far to seek. It is due to the high birth rate among the French-Canadians. This is a national asset that is being recklessly squandered similarly to all the national resources. The moment this birth rate drops to a noticeable extent then we will find the public making a slogan of child welfare to prevent the extinction of the race. This is the cause that has produced the great welfare efforts in the other countries of the world. At the present time the high birth rate more than balances the awful infantile mortality, so the public feels it can ignore the health of the children.

It is better not to lay too much stress on the physical changes wrought by child labour, because, if premature employment caused no physical damage there would still be an excellent case against it. The damage done to the child from excessive work may be difficult to detect until he has been engaged at it for a period of years, owing to our having no adequate standards of normal development. When it is remembered that the children are seldom given any follow-up care after they begin their employment, it is easy to see the difficulty of getting figures for a large number of cases. The newsboy, unless he has to carry heavy loads of papers over long distances or lose his sleep from early rising and working late, may not have any perceptible physical damage to show, and yet the moral decay from this trade is extreme.

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\*Read before the Anti-Child Labour League at the Royal Victoria College, Montreal, April 12th, 1921.

Physiologists frequently divide the growing period of childhood into three parts according to the varying periods of development, and when the characteristics are more or less similar. Between the first and six years the child is generally considered at its most attractive age. He is very affectionate, easy to control and lead, and secures most of his information and development from imitation and eternally asking questions. From six to fourteen appear new characteristics which are more or less normal according to the degree in which they exist. He is more selfish and very often considerably wilful. At this age, too, we often notice a child telling lies and sometimes stealing, without knowing why he should not do so. Both father and mother are needed, probably to an equal degree, during this period.

Between the ages of fourteen and seventeen the child goes through probably the most important stage of his development. Curiously enough, too, this is the age when we must look after him in industry. It is the age of sex development. He is making the greatest growth in length since the period of infancy. His metabolism calls for a greater supply of nourishment per day than at any future time of his career, unless he is to follow one of the more strenuous occupations. This is the cause for his appearing to be lazy. His reluctance to work is due to the insistent demand of his body for energy to grow rather than allowing energy for work.

One of the striking phenomenon of this period is the boy's rebellion against authority. His will is developing. If this is unduly hindered the type of adult will be lowered accordingly. Monotony at this period of life will kill the best instincts of the future citizen, and very often lead to Bolshevistic tendencies, or sometimes to the vicious characters so often encountered in city life. This is the period when nature demands a variety of scene and occupation. It is now that the vocational school should train the boy that the public school n longer can interest. The school must come to the boy instead of the present unsuccessful method of trying to adapt the boy to the school.

This is the awkward age. Nature is working too fast to be able to produce at once both quality and quantity. The larger bones and muscles are growing at the expense of the smaller ones. Hence we should not put such a boy at a machine which may develop his smaller muscles excessively and make him quick at eye and supply dexterity to the hands. This can only be done at the expense of his frame work or constitution on which he must rely for his health



during the rest of his life. If the bones and muscles are sacrificed severe postural deformities develop which will handicap the child as long as he lives. He will then be refused work by all manufacturers who require a physical examination before employment.

This is the age for careful development of the boy, the time for his education in its broadest sense, the time for prohibiting anything which does not develop. Here we must have a wise mixture of schooling, working and playing, and all must be conducted so as to produce the greatest and wisest development.

Play is one of the strongest of nature's demands. By play children develop their physical and moral natures into those of manhood and womanhood. The values are so real that they endure as long as life does. They are so intangible that they can never be fully estimated, and the loss of them may be so serious as to wreck an individual who would otherwise be an asset to the country. With his fall he may bring down not his family alone; his views may be sufficiently warped to drag down hundreds or even thousands with him.

When the people are convinced that a child is not a little man or woman, but a being in process of constant physical formation, the features of which are so delicate that the same care is required to reach the proper stage of adult life as was needed to save that life in infancy, then no more will be heard of the benefits of hard and exacting labour. It is to be hoped that the method of training children for the struggles of life, by toughening them through early labour, has been discarded forever. Undoubtedly the method broke far more children than it ever made.

Muscular exercise is beneficial. It is the means that nature supplies for strengthening and developing the muscles. It makes them grow. To accomplish proper growth the exercise must be not too severe and not too long continued. Likewise the exercise must be constantly varied. If it be continued after fatigue sets in, only harm can result, as the waste products are not got rid of, but accumulate within the tissues. This will in time lead to atrophy and weakness. It is this danger to be dreaded in factory work. Many of the jobs performed by children are of such a character that only one set of muscles is used. The fatigue of too much standing in boy's work and constantly sitting in girl's occupations leads to postural defects of the feet or of the spine. These defects permanently lower the wage-earning capacity of the workers, and in the case of girls may lead to a permanent derangement of health and difficulty in child-bearing. It is a truism that a boy will never become an

athlete from standing at a loom, delivering packages or picking berries.

Farm labour is cited as a type of work that should be developmental, as it entails plenty of out-door exercise, and besides it is educational. There is little of the latter in constantly doing chores and running messages. The educational result seems to lead the child away from the farm when he becomes an adult. The physical benefits are just as unreal, as country boys are noted for their round shoulders and flat chests. The examination of recruits for the army showed no better results from country recruits than from the city men. In the army camps the city men excelled those from the country in symmetry of body, in quickness and sureness of motion, and in resistance to fatigue, as well as in mental alertness.

What class of children should be entirely eliminated as a factor in the industrial problem? I would say without hesitation that all children more than 10% under weight, that those, with defects of sight and hearing, with poor muscular growth or bone formation, with heart, lung or kidney disease, must not be abandoned by the State to the rigours of an industrial life because they have reached the age of 14 years. It is well known that uncorrected eye defects may increase from 5-15% among employed children.

What ages should children reach before starting work? Fourteen years must be the minimum for all kinds of employment, including farm labour and domestic service. Sixteen years should be the minimum where the work entails any hazard, and eighteen years for those occupations which are extra hazardous.

What should be the restrictions regarding hours of labour? No child can study for a ten hour day; nor play for ten hours or more without harm. How much less reasonable to suppose that a child of tender years, with bones and muscles in the process of formation and growth, may be put to the single task of earning profits for its employer, or bread for its progenitors, for ten to twelve hours per day.

Certain occupations, damaging to all health, are particularly dangerous if not deadly to those who have not attained the strength of adult age. Inspectors must have the right to exclude children from such occupations or transfer them to some other process in the occupation which may not be similarly dangerous. These forbidden occupations must include the following:

1. Processes involving exposure to poisonous dust: e.g., the manufacture of paint or plumbing supplies, typesetting, file-cut-



ting, certain occupations in the manufacture of rubber and storage batteries:

2. Processes involving exposure to irritant dust, e.g., 1. Graphite dust as used in stove polish; 2. Bronzing in lithographing; 3. Cutting, grinding or polishing with emery; 4. Talc dusting in rubber works; 5. Sorting, dusting, cutting or grinding rags; 6. All work in and about mines.

3. Processes involving exposure to poisonous gases and fumes, e.g., Using naphtha in the manufacture of rubber goods, japanned or patent leather; gasses from lead processes.

4. Irritating gases and fumes, e.g., 1. Gassing in textile factories; 2. Singeing in print works, bleaching and dyeing works; 3. Dipping metal in acid solution.

5. Exposure to extremes of heat and other conditions which promote susceptibility to disease.

A glance at our school children only serves to strengthen the case against child labor. There is no disputing the fact that 25½ of all school children are suffering from malnutrition. The recent survey published by Miss Helen R. Y. Reid on the state of the health of Montreal children showed that among the soldiers' families the percentage was even higher than that. As the worst school is safer for the child than the best factory one might well indict all child labour as being unfit for a child. That the young adults of to-day are far from being good specimens was shown by the examinations for the army. About one-quarter of all applicants had to be refused, owing to defects. These are sorrowful figures from a health standpoint, but must be faced unless we are to rest in a fool's paradise. Should not such results spur us to greater efforts to look after the health of the children of to-day who will be the men and women of to-morrow?

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# London Social Service Council Report of Public Health Committee on Infant Mortality

Committee.—Lt.-Col. Wm. M. Gartshore, Pres., London Child Welfare Association; Miss Bertha Smith, Supervising Nurse, L.C.W.A.; Dr. W. S. Downham, M.O.H., London; Mr. R. H. Sanders, Inspector, B.O.H., London; Miss Helen Tufts, Assistant Secretary, London Children's Aid Society; Miss B. D. Friend, Industrial Nurse, Sommerville Box Factory; Dr. H. W. Hill, Director, Institute of Public Health, Chairman.

## INTRODUCTION.

THE twentieth century already has been signalized by a remarkable turning of human attention from human surroundings to humanity itself.

The nineteenth century dealt largely with developments in physics, chemistry, biology, mechanics, engineering. It saw the development of great railroads and steamship lines, the growth of huge cities, the establishment of enormous fortunes, an unprecedented development in all the physical and biological sciences. This latter, with the discovery of bacteria as the cause of most disease, placed the treatment of the sick medically and surgically on a quite new basis, making a science of the care of the sick, which previously had been at best a very crude art. From all this increase in knowledge of the surroundings of man came a new view point of man himself.

This twentieth century development of the study of humanity has developed a keener appreciation of the value of the individual, not only to himself but also to the community; and has recognized that the value of the strong, healthy, active individual is much greater to the community than that of the defective, the weakling, the unfit in any respect. Hitherto physical disabilities have been looked upon as individual misfortunes. Now they are seen as community misfortunes also. The appalling physical defectiveness of the average citizen, brought out vividly by the physical examination carried on for war purposes, made this particularly evident and resulted in a search for the underlying causes. It was soon seen that the effect of the immediate environment was a quite inadequate explanation. Inspection of school children, both in town and country, revealing similar defective physique, led to the examination of children at still earlier ages, and we are now compelled to admit that defective adults are to a large extent defective not because of their adult or adolescent life history or surroundings, but because of improper conditions existing when they were children,



when they were infants or even more before they were born; not environmental conditions in the ordinary sense, but intimate physiological conditions affecting their bodies from within, not from outside—*disease, nutrition, heredity*.

Thus has arisen the great Child Welfare Movement, which bids fair to nickname the twentieth century "The Century of the Child," and thus has arisen also the guiding principles of the movement, which may be summarized as "the individual *first—then* his surroundings."

That Child Welfare must begin with the parents has been recognized by philosophers for thousands of years. The practical application of this philosophy is seen to-day as an outgrowth of the studies of infant mortality. These studies began with the idea of discovering how to care for babies and preserve them to the race by measures applied after the baby was born. But the evidence obtained showed that in a preponderating proportion of cases, such measures must antedate birth to be effective.

The Child Welfare Movement has not shifted its ground; but it has expanded its territory—to include prenatal conditions. It has recognized not only the need of saving babies, but of saving mothers;\* not only of preventing deaths, but in some instances of preventing births, that otherwise inevitable deaths need not occur. The prevention of child-bearing by parents unfit to produce healthy offspring, especially childbearing by those feeble-minded parents who inevitably produce feeble-minded offspring, is as important a subject in the child welfare as is the cutting down of infant mortality by prolonging the lives of the fit: and far more important than prolonging the lives of the unfit.

#### CHILD WELFARE ASSOCIATION.

The causes of infant mortality in London, Ontario, have been studied at first hand by the Child Welfare Association of London for some years. This Association was inaugurated after a most successful and inspiring Baby Week Campaign held in February, 1918, when 430 babies were examined and submitted to the weighing and measuring tests for development and nutrition.

A weekly clinic for sick babies and preventive work was opened in Victoria Hospital on March 12, 1918, but owing to there being

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\*The general (U.S.) death rate of mothers in childbirth has recently been announced as 88.48 per 10,000 births (including stillbirths). *Am. J. of Hygiene*. March, 1921.

no way of following these cases into their homes, it is difficult to judge results.

September 1st, 1918, the first Child Welfare Nurse, Miss Bertha Smith, was appointed to give full time to this work, and January, 1919 saw the opening of three Well Baby Clinics, at Talbot Street., Riverview and Chesley Avenue Schools.

There any mother could bring her baby to be examined and, if the baby were well, received advice how to so feed and otherwise care for that baby as to keep it well: if the baby were undernourished, how to bring it up to normal; if any defect were detected, the mother was advised to have such remedied and referred to her family physician for treatment. If she had no physician she was referred to the Out-door Department of Victoria Hospital.

There have been 3 classes of babies brought to the clinics; the normal babies; those babies in whom some defects were found, and the malnourished, from those slightly underweight to a degree of emaciation resembling that of famine babies.

The opening of the clinics, coming directly after the terrible "flu" epidemic of October-December, 1918, unearthed many of these malnourished babies. Some of these infants had lost their mothers at birth, others were born prematurely, while the mothers were very ill. Deprived of their natural nourishment, mother's milk, and entering life thus handicapped, these infants were slowly dying of starvation for want of the food their weakened digestive organs could take care of.

To many mothers the family physician had given formulas and feeding directions, but there was no one to see them properly carried out. Probably the baby did not gain at once; and then the advice of neighbours was taken to change the food; so that the babies steadily lost weight. In each clinic there were from one to three of these cases, and it was a work of infinite patience to get good results. It meant not only a weekly weighing, the result of which indicated the suitability of the quality and quantity of food prescribed by the doctor in attendance, but almost daily visiting, demonstrating the preparation of food. Directions may be ever so clear and yet misunderstood, but the preparation of food under the mother's eye and the demonstration to the mother of exactly how much to increase daily to get up to the prescribed formula leaves little room for mistake. The regulation of the hours of feeding and sleep, the temperature and ventilation of rooms, the clothing, the handling, or rather, non-handling, etc., were taught, but, and to get these rules rigidly carried out, required all powers



of persuasion and patience; "baby cried" being generally considered sufficient excuse for disregarding them. It was a tedious process, but the reward came when, at the Annual Baby Week Exhibit in the spring of 1920, these same babies competed for prizes with normal babies, who did not enter life with their handicaps, and were put in the A1 Class. If the London Child Welfare Association had done no more than make this possible, this alone would justify its existence.

Another class of children were found undernourished from defects, principally diseased tonsils and adenoids, which the mothers were advised to have removed and were referred to their family physicians, or if none, to the special eye, ear and throat clinic at Victoria Hospital. It was gratifying to see the improvement after operation in many of these cases. These histories are continually being repeated from mother to mother, and so many more come for this preventive advice. The clinics have increased, gradually at first, more rapidly the last six months, until the attendance now ranges from 3 to 42, with an average of 19 for the past six months, as against 9 for the first year of the clinic work. The number of families being visited increased from 280 on March 1st, 1920, to 456 on March 1st, 1921, at which date another Nurse was added to the staff, making 4 in all.

#### WHAT TANGIBLE RESULTS ARE THERE FROM THIS WORK?

1st. The increasing number of healthy, well-nourished children and of mothers being educated to the fact that baby-raising is as important a science as raising puppies or canary birds, or any other branch requiring special knowledge and skill.

2nd. Most striking to the average observer, the lowering of the infant mortality rate of 1920 from that of 1919 by about 12 per cent.

#### WHERE HAVE THESE REDUCTIONS BEEN MADE?

Principally in deaths from gastro-intestinal diseases, in death from infections (other than flu-pneumonia) and deaths in children suffering from malnutrition.

The deaths from gastro-intestinal diseases were:

In 1916—57, or about  $4\frac{1}{2}$  per cent. of total live births.

In 1917—38, or about  $3\frac{1}{2}$  per cent. of total live births.

These in 1919 were reduced to 6, or  $\frac{3}{4}$  of 1 per cent. of total live births, and in 1920 were further reduced to 10, or 7-10 of 1 per cent. of total live births.

In the Well-baby Clinics mothers are taught that prevention is better than cure, the importance of cleanliness of body and surroundings, the importance of taking care of milk and protecting food from flies, the importance of feeding properly, that children be well nourished and not fall ready victims to disease, and above all, the importance of breast feeding their infants and of what mothers' milk means to their babies. These teachings have without doubt largely contributed to this reduction.

The reasons for the high rate of infant mortality, apart from those deaths caused by the prenatal condition of the mother seem to be:

1st. The almost criminal lightness with which babies are deprived of their natural food, mother's milk, and put on artificial feeding, and where this is done the advice of neighbours and friends followed as to food, instead of consulting a qualified physician or bringing to a clinic.

2nd. The ignorance of so many young mothers of the principles of good housekeeping. In these days of high cost of living, the earning capacity of each member of the majority of families must be utilized. Girls leave school at 14, enter factories, marry early, and begin homes of their own without any preparation for the duties they are undertaking. They know little of the preparation of nourishing foods and fall back upon ready to eat boxed and tinned foods, expensive, and with little nourishment in them. Domestic science as now taught in schools is a big step in the right direction, but if now that the school age is being raised from 14 to 16 years, one at least of these years could be spent in a school of housewifery, where mother craft is taught as well as good housekeeping methods, much might be done towards making happy homes for our citizens as well as materially lowering our high rate of infant mortality.

*To be continued.*



Sept 1924

## Report of the Committee on Public School Education

BY MARY E. CRAWFORD, *Chairman Committee on Public School Education, Canadian Public Health Association.*

THE work of your committee this year has consisted in following up that done last year, which was to find out in a general way what health standards obtained in the Public Schools of the Province and chief cities of Canada.

The report presented to you at last year's Congress showed, as a result of the questionnaire sent out, that education of the school children in health was by no means uniform throughout the Dominion, and that on the whole the subject of health teaching has no essential place on the school curriculum.

The health of the children themselves, is cared for, however, with a thoroughness that is highly creditable to the school medical authorities who in the majority of cities are carrying on the work with staff inadequate in numbers.

Your committee felt that it is this very fact which is acting as a handicap in the carrying out of the proper instruction of our school children in the essential facts of health so that they may understand what health really means.

In order to ascertain the standards of our provinces and cities in the teaching of this subject in the urban and rural schools, a questionnaire was prepared and sent out this year to the cities, and in a slightly different form to the provinces. It embodied two recommendations which were designed to form a basis for an adequate system of health teaching, which those replying could amend as they saw fit.

The questionnaire did not always fall into the hands of the school medical authorities, and this gives an interesting variety to the answers, since we get a different view point.

In passing, a suggestion occurs as a result of this. Would it be possible for the C. P. H. A. to publish annually through the journal lists of all those in charge of the medical work in schools throughout Canada? In this way we might be able to keep more closely in touch with each other, with more uniform results in our work.

The answers from 13 cities have been returned by 7 school medical officers, 1 nurse, 1 superintendent of schools, 1 medical officer of health, 1 public school inspector, 1 secretary of the school board, and 1 superintendent of child hygiene. The Provincial returns were sent in by 4 Provincial Medical Health Officers, 1 Provincial Medical Officer of schools, and 1 Director of School Hygiene.

Cities replying are:

Calgary, Saskatoon, Regina, Quebec, Halifax, London, Montreal, St. John, N.B., Sydney, N.B., Toronto, Winnipeg, Vancouver, Windsor and Brandon.

The recommendations sent out are as follows:

1st. That since it is desirable that the teaching of the principles of health and hygiene should have a definitely established place in the Public Schools of Canada, and since the school nurse is specially trained in this subject, sufficient nurses be employed to enable them to give adequate time for this purpose, each nurse to have not more than 1,000 children in her care.

2nd. Also, that tests be set for the children in this subject, and that these be given the same credit as other subjects on the school curriculum.

The questionnaire for cities is as follows:

How many nurses are employed in your city schools?

How many of them are engaged in the systematic teaching of hygiene throughout the year?

How many children has each nurse in her care?

What is your opinion of recommendation No. 1?

What is your opinion of recommendation No. 2?

Would you endeavour to use your influence to carry this measure into effect in your city?

What suggestions would you offer as to the best method of accomplishing this?

The questionnaire for the Provinces is as follows: (These questions apply only to rural or suburban districts in your Province.)

How many nurses are employed in your Province who have schools in their care?

How many of these are engaged in the systematic teaching of hygiene throughout the year?

How many children has each of these nurses in her care?

What is the area of territory covered by each nurse?

The last four questions are the same as in the other.

Summarizing the answers, gives the following results:

Thirteen cities responded.



The answers to questions 1 and 3 show that in 1 city each nurse has 800 children in her care (Quebec Protestant schools).

In 1 she has 1,000.

In 1 she has 1,200.

In 1 she has 1,500.

In 1 she has about 1,600.

In 1 she has 1,600.

In 1 she has 2,000.

In 1 she has 2,150.

In 1 she has 2,250.

In 2 she has 2,500.

In 1 she has 3,300.

In 1 she has 4,000.

In 1 she has 7,500.

How many engaged in systematic teaching of hygiene?

Taught definitely by teachers, 7.

Practical teaching by nurses, 1.

Teaching by nurses incidental to their examinations, 1.

Health Talks given systematically in class room, 3.

Unanswered, 1.

Opinions of recommendation No. 1.

Teaching should be done by teachers rather than nurses, 4.

Teaching should be done by nurses rather than teachers, 6.

Teaching should be done by teachers, nurses co-operating, 2.

Opinions of recommendation No. 2 (Tests), unanswered, 1.

Already in effect, 3.

See that teaching is carried out in practice rather than tests, 2.

Approval (unqualified), 8.

3. Cities anticipate objections to No. 1 on account of increased expense.

Of those who think that nurses should do the health teaching include: 3. Medical Officers of schools. 1. Secretary of School Board. 1. Superintendent of Child Hygiene.

Those who prefer co-operation of both teachers and nurses include: 2. Medical Officers of Schools.

That tests should be given, met with some opposition; 1. Medical Health Officer, and 1. Medical Officer of Schools preferring that health rules are carried out in daily practice only.

In 3 cities the giving of tests with equal credits is already in effect, Halifax, London and Windsor. In the last-named city the nurses mark the examinations in hygiene.

Of the eight who give unqualified approval, one adds as his rea-

son that the understanding of health is more important than any other subject on the curriculum. I feel sure that in saying this that he is expressing what we all agree with, and that is exactly the point that we wish to impress on all school authorities.

Some excellent suggestions were received as to how to go about it. To quote: From Calgary Dr. Geraldine Oakley, "Each nurse to give a lesson to each school room once a month, on points taught by the teacher. Question to see if these have been understood. This should work out at one lecture a day."

Dr. Eugene Gagnon, Montreal, says: "Prepare a detailed programme outlining important subjects, and to what grades these should be applied, and take up, with interested authorities."

Dr. Hastings, Toronto: "Explain to educational authorities and have nurse demonstrate value in schools. Let nurse interest teacher to teach hygiene."

Dr. Wightman, Vancouver: "Impress advantages of nurses being assigned this duty, upon Provincial Government, city and municipal councils, and public school trustees, and give summer courses for nurses to train them to teach health."

All of those who preferred that teachers should give this teaching, did so on the ground that the teaching would be done more efficiently by them, and, of course, a necessary corollary to this is that it should be included by every Province in the Normal School Training Course.

In this connection Dr. Wightman's suggestion is worth noting.

The Provinces replied as follows:

Six returned the questionnaire out of nine communicated with—Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and Saskatchewan.

No reply was received from Alberta, British Columbia, Yukon Territory.

Number nurses employed in rural and suburban districts, 2.

8 employed now, shortly to be 18, 1.

50 employed in 1.

Nurses employed in 7 rural districts, 1.

Nurses accompany school inspectors, 1.

Number of children in charge of each nurse:

2,000 to 6,000, 1.

600 to 1,000, 1.

None in 2.

No information, 1.

Area of territory covered:



1,000 to 2,000 square miles, 1.

2 townships to an area 3 miles square none, more than 40 class rooms, 1.

2 to 30 miles radius, 1.

None, 2.

No information, 1.

Nurses definitely engaged in teaching hygiene, 3.

None in, 2.

No information, 1.

*Opinion of Recommendation 1:*

One says: "Better done by physicians, nurse to illustrate tooth brush drill," etc.

Two say: "To be done by nurse, and that she should have no more than 1,000 children in her charge if general public health work is done by this group of nurses."

No answer from 1.

*Opinion of Recommendation 2:*

Tests already given by Dept. of Education, 1.

Tests should be given, 2.

Presented as a complement to other work, no tests in beginning, 1.

More emphasis should be placed on practical results, 1.

Unanswered, 1.

*Suggestions:*

Question to be left to Board of Education, 1.

Teachers are already qualified to teach if necessary, schools overloaded by extraneous teaching and interference of outside voluntary organizations, 1.

Teachers to co-operate with nurses, 1.

Representatives from Health Department should bring measures to the attention of Ministers of Education of various Provinces for their co-operation, 1.

No suggestion, but willing to co-operate, 2.

The conclusions that may be formed from all the foregoing material are—that the majority of opinions favour:

That systematic teaching of essentials of health should be carried out in all public schools.

That teachers should teach this subject, and that nurses should teach, opinions are divided.

But that whoever teaches it, should have a thorough training in the subject, and how to teach it all are agreed upon.

And that as a natural consequence of this training, tests of equal value with other subjects on the curriculum should be prescribed. At present this subject depends too much upon the teacher's interest in it. Your committee feel in common with the majority of opinion that the only way to emphasize it is to make it a required subject with tests.

Also that the material to be taught should be carefully graduated to suit different grades, working up from simple statements of physiological facts to the more detailed teaching in the proper hygienic measures to be followed in maintaining health standards by correct living and prevention of disease.

One excellent suggestion came from the Superintendent of Winnipeg schools: "That reading lessons on health and hygiene, graded to suit, should be incorporated in every school reader, and that this period be used to instil necessary facts."

Your committee would like to have from this Congress some suggestion as to the following up of this subject in the future, which could be acted upon by whoever is to undertake it in the coming year.

For instance, the outlining of a suitably graded course in health and hygiene for use in the schools for presentation to the Provincial and Health and Educational authorities for their approval.

This would be a rather ambitious undertaking and would call for a carefully selected committee to carry it out, and a good deal of time should be spent upon it. It would, of course, be first submitted to the C. P. H. A. to be passed upon.

We wish to recommend that the proceedings of this present Congress be published as a whole, so as to be more readily accessible.

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# Social Background

## Canadian Conference on Public Welfare

### PROVISIONAL PROGRAMME.

MONDAY, SEPT. 26TH—HALF HOUR PAPER, HALF HOUR DISCUSSION.

Morning—Registration.

11.00 a.m.—Executive Meeting.

Afternoon—Housing.

2.30-5.30—(a) House Construction under Dominion Act.

An Ottawa Official

(b) Essentials in a law respecting tenement property and problems of enforcement.

(c) The social effect of Bad Housing.

Evening—Banquet—

7.30 p.m.—President's Address.

Toasts—The Mother Country.

The Dominion.

The U. S. A.

The Province.

The city.

9.30 p.m.—Reception of out-of-town delegates.

Music, Dancing.

### TUESDAY 27TH.

Morning—Desertion and Non-Support.

10-12 a.m.—(a) Existing legislation deficiencies and enforcement problems. The extradition treaty amendment.

(b) Social causes and social effects of Desertion and Non-Support.

Afternoon—Illegitimacy.

2.30-5.30 p.m.—(a) The case treatment of the unmarried mother.

(b) Recent legislation.

(c) A study of causation.

## Evening—Industrial Relations.

8.30-10 p.m.—(a) Cost of living and wages; their rise and fall, Dept. of Labor, Ottawa.

(b) Joint Councils of Industry in Canada.

Mr. Francis Hankin, B.C.L.

(c) Labor's idea of the necessary motivation to individual industry.

## WEDNESDAY 28TH.

## Morning—Immigration and Colonization.

10-12 a.m.—We are seeking suggestions from the West.

## Afternoon—Social Diseases.

(a) Venereal Diseases.

(b) Tuberculosis.

(c) Mental Diseases.

Presented by representatives of National Committees.

## Evening—6.00 p.m., Supper.

Reports from Provincial Secretaries.

Annual Meeting.

Election of Officers.

Selection of Conference City for 1922.

National Council of Child Welfare programme is being developed by that body for Thursday and Friday's sessions.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF JULY, 1921.

#### COMPARATIVE TABLE.

|                                 | 1921.  |         | 1920.  |         |
|---------------------------------|--------|---------|--------|---------|
|                                 | Cases. | Deaths. | Cases. | Deaths. |
| Smallpox .....                  | 104    | 1       | 142    | 0       |
| Scarlet Fever .....             | 101    | 3       | 169    | 4       |
| Diphtheria .....                | 285    | 19      | 302    | 46      |
| Measles .....                   | 223    | 3       | 1419   | 15      |
| Whooping Cough .....            | 227    | 7       | 106    | 5       |
| Typhoid Fever .....             | 44     | 18      | 35     | 8       |
| Tuberculosis .....              | 165    | 121     | 161    | 82      |
| Infantile Paralysis .....       | 3      | 0       | 2      | 0       |
| Cerebro-Spinal Meningitis ..... | 4      | 4       | 3      | 3       |
| Influenza .....                 | 2      | 2       | 9      | 9       |
| Pneumonia .....                 | 114    |         | 116    |         |
|                                 | 1158   | 292     | 2348   | 288     |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR JULY, 1921.

#### COMPARATIVE TABLE.

|                  | 1921   | 1920   |
|------------------|--------|--------|
|                  | Cases. | Cases. |
| Syphilis .....   | 159    | 131    |
| Gonorrhoea ..... | 204    | 135    |
| Chancroid .....  | 4      | 0      |
|                  | 367    | 266    |

**SMALLPOX CASES REPORTED BY LOCAL BOARDS OF  
HEALTH FOR THE MONTH OF JULY, 1921.**

|                           | Smallpox.              | Cases. | Cases. |
|---------------------------|------------------------|--------|--------|
| Carleton .....            | Ottawa .....           | 33     | 0      |
|                           | New Richmond .....     | 1      | 0      |
|                           | Nepean Tp. ....        | 2      | 0      |
| Essex .....               | Essex Border Mnp. .... | 2      | 0      |
| Frontenac .....           | Kingston Tp. ....      | 1      | 0      |
| Grey .....                | Hanover .....          | 1      | 0      |
|                           | Meaford .....          | 1      | 0      |
| Hastings .....            | Marmora V. ....        | 1      | 0      |
| Kent .....                | Ridgetown .....        | 1      | 0      |
| Lambton .....             | Enniskillen .....      | 2      | 0      |
|                           | Warwick .....          | 1      | 0      |
| Lanark .....              | Pakenam .....          | 1      | 0      |
| Leeds and Grenville ..... | Lansdowne Rear .....   | 7      | 0      |
| Middlesex .....           | London .....           | 3      | 0      |
| Nipissing .....           | North Bay .....        | 1      | 0      |
| Ontario .....             | Oshawa .....           | 1      | 0      |
| Peel .....                | Bolton .....           | 5      | 0      |
| Simcoe .....              | Orillia .....          | 2      | 0      |
| Sudbury .....             | Sudbury .....          | 1      | 0      |
| Timiskaming .....         | New Liskeard .....     | 2      | 0      |
|                           | Latchford .....        | 2      | 0      |
|                           | Thornlow .....         | 1      | 0      |
|                           | Haileybury .....       | 1      | 0      |
|                           | Dymond .....           | 1      | 0      |
| Victoria .....            | Ops .....              | 2      | 0      |
|                           | Emily .....            | 4      | 0      |
| Waterloo .....            | Kitchener .....        | 2      | 0      |
|                           | Waterloo Tp. ....      | 7      | 1      |
|                           | N. Dumfries .....      | 1      | 0      |
| Wellington .....          | Arthur Tp. ....        | 1      | 0      |
|                           | Eramosa .....          | 4      | 0      |
|                           | Mt. Forest .....       | 1      | 0      |
|                           | Guelph Tp. ....        | 4      | 0      |
| Wentworth .....           | Hamilton .....         | 1      | 0      |
| York .....                | Toronto .....          | 3      | 0      |
|                           |                        | <hr/>  | <hr/>  |
|                           |                        | 104    | 1      |



## The North European Conference on Venereal Diseases

THE first North European conference on venereal diseases opened at Copenhagen on May 20, under the auspices of the League of Red Cross Societies. Besides the Danish Red Cross Society, which is acting as host and convenor of the conference, the latter is attended by representatives of the following national Red Cross Societies: Finland, Germany, Great Britain, Holland, Norway and Sweden.

In December, 1920, an All-America conference on venereal diseases was held at Washington, D. C., and was attended by representatives of North and South America. The results of this conference, which are expected to be very far-reaching, are to be presented to the Copenhagen meeting.

The problems under discussion at the conference are: (1) general summary of the conditions in each country; (2) medical measures against venereal diseases; (3) educational measures against venereal diseases. These subjects are to be presented by each national Red Cross delegation participating in the conference.

Special questions under consideration are:

(1) The supply and cost of arsenical compounds for the treatment of syphilis; the possibility of establishing an international standard for the export and import of such compounds. (2) The provision in important ports, by international agreement, for the treatment of cases of venereal diseases among sailors. (3) The Red Cross in the anti-venereal campaign, its relation to government and voluntary agencies. (4) Medical measures for the prevention of venereal diseases.

The following is the list of the delegates of the Red Cross Societies participating in the conference.

Danish Red Cross Delegation.—Prof. Harald Hoffding, president of the Danish R. C. Society; Dr. Thorvald Madsen, director, Sero-logical Institute, Copenhagen; Prof. Rasch, Dept. of Dermatology and Venerology, University of Copenhagen; Dr. O. Jersild, Dept. of Venereal Disease and Dermatology, Rudolph Bergs Hospital, Copenhagen; Prof. E. Ehlers, Dept. of Venereal Diseases and Dermatology, City Hospital of Copenhagen; Mr. U. Woldike, School

Inspector; Mr. Schepeleern Larsen, Inspector of Sanitary Police; Dr. Svend Lomholt, Dept. of Venereal Diseases and Dermatology, Royal Danish Marine Hospital, Secretary of the Delegation.

German Red Cross Delegation.—Prof. Jadassohn; Prof. Galewsky; Prof. Pinkus.

British Red Cross Delegation.—Col. L. W. Harrison, British Ministry of Health, Director of Venereal Disease Clinic, St. Thomas Hospital, London; Dr. F. N. Menzies, Principal Assistant Medical Officer, Public Health Dept., L. C. C.; Mrs. Neville Rolfe, Gen. Sec., National Council Combating Venereal Diseases.

Finnish Red Cross Delegation.—Dr. W. Stockmann.

Dutch Red Cross Delegation.—Prof. G. J. W. Koolemans-Beijnen, Dept. of Tropical Diseases, University of Leiden; Dr. W. F. Veldhuijzen, Asst. Director, Wilhelmina Hospital, Amsterdam.

Norwegian Red Cross Delegation.—Dr. Kristian Gron, Director, Christiania Public Hospital.

Swedish Red Cross Delegation.—Dr. Karl Marcus, Medical Superintendent, St. Goran Hospital, Stockholm; Dr. Sigurd Ribbing, Medical Department, Swedish Government.

League of Red Cross Societies.—Prof. C. E. A. Winslow, Director, Dept. of Health; Mr. Walter Clarke, Chief, Division for Combatting Venereal Diseases; Lt.-Col. T. F. Ritchie, late R. A. M. C., Asst. Chief, Division for Combatting Venereal Diseases; Mr. L. E. Gielgud, Dept. of organization; Mr. S. R. Hodges, Secretary of Delegation.

Following this first North European conference on venereal diseases in Copenhagen, the League of Red Cross Societies expects to arrange other conferences of groups of nations, both in Europe and in other parts of the world.

RESOLUTIONS ARISING OUT OF THE PROCEEDINGS OF THE NINTH  
EUROPEAN RED CROSS CONFERENCE ON VENEREAL DISEASES  
COPENHAGEN, MAY 20TH-25TH, 1921.

This conference, having considered the general measures for the combatting of venereal diseases, which have been adopted by the participating countries, is unanimously of opinion, so far as the experience of these countries is concerned.

(1) That the provision, by responsible health authorities of adequate facilities for diagnosis and treatment on lines which ensure that the greatest possible number of infected persons is rendered non-infective is a measure of prime importance to the reduction of



venereal diseases. The urgent necessity of commencing treatment at the earliest possible moment should be emphasized. It is suggested that the above facilities should be provided free of cost to the patient where they are otherwise unlikely to be utilized to the fullest extent.

(2) That the questions of compulsory notification and of compulsory treatment, being dependent on the experience, resources and psychology of the people concerned in each country, must be decided by individual nations.

(3) That instruction, theoretical and practical in the recognition of venereal diseases, particularly in their earliest manifestations and in their treatment should form a part of the curriculum of every medical student and that satisfaction of a test of proficiency in this subject should be a condition of every medical qualification.

(4) That provision should be made, at suitable treatment centres, for such instruction of medical practitioners in the diagnosis and treatment of venereal diseases as will enable them to recognize these disabilities promptly and secure their adequate treatment.

(5) That the regulation and official toleration of professional prostitution has been found to be medically useless as a check on the spread of venereal diseases and may even prove positively harmful, tending, as they do, to give official sanction to a vicious traffic.

(6) That the provision of hostels and rescue homes for the temporary care of girls suffering from venereal diseases is a valuable means of preventing the spread of these diseases.

(7) That the provision of opportunities for wholesome entertainment and recreation is an important factor in reducing the temptation to exposure to venereal infection.

(8) That enlightenment of the general public on lines which are best calculated to minimize exposure to infection and emphasize the necessity of thorough treatment, is an essential part of any scheme for the combatting of venereal diseases. Instruction should particularly be addressed to parents and teachers in such a form as will enable them to give clear information on the reproduction of life and impress on adolescents the importance of individual responsibility to future generations. In the training of teachers, special courses on these subjects should be provided.

(9) That this conference welcomes all efforts of Red Cross Societies directed towards supplementing the efforts of official governmental agencies where the circumstances in the respective countries permit and indicate such activities, and in supporting the work of voluntary societies in the campaign against venereal diseases; and

also welcomes the efforts of the League of Red Cross Societies in co-ordinating the activities of voluntary societies in this campaign throughout the world.

#### TREATMENT OF SEAMEN SUFFERING FROM VENEREAL DISEASE.

The North European Conference on Venereal Diseases assembled at Copenhagen May 20th to 25th, 1921, is impressed by the high importance of combatting venereal diseases amongst merchant seamen, not only as a measure of humanity to seafarers, but also as a measure of protection against the spread of these diseases, and is strongly of opinion.

(1) That facilities for the scientific diagnosis and the treatment of venereal diseases in merchant seamen by skilled specialists should be provided at all the important ports of the world.

(2) That, in anticipation of the signature of any international agreement on the subject, steps should be taken by all maritime nations to provide these facilities with the least possible delay.

(3) That treatment, including maintenance in hospital, in the special cases where this is essential, should be free to merchant seamen of all nationalities.

(4) That crews of incoming vessels should be informed of the existence and location of treatment centres at each port of call, and of the hours of consultation. This should be the duty of the health authority of the port, but it is suggested that, in the course of time, it should be possible for a ship's master to collect this information and to post it up well in advance of the ship's arrival.

(5) That, in order to secure intelligent continuity of treatment, the details of treatment, progress and results of pathological examinations should be entered on a card, to be carried by the patient.

(6) That the expressions and terms used on the patient's card mentioned in (5) should be based on an international code, so as to be intelligible to the medical officers at the treatment centres of all ports.

(7) That in view of the many different methods of performing the Wassermann test and the different systems of notation employed, it is desirable that an authoritative comparison between the principal methods and notations should be carried out. It is suggested that this work might be undertaken by the health organization of the League of Nations.

(8) That facilities for the continuation of such treatment as is within the capacity of a member of the crew appointed for the purpose should be provided on all ships.



(9) That in view of the fact that much venereal disease is contracted by men who would not have exposed themselves if there had been other pastimes available, the provision of healthy and attractive recreations at all ports is a measure of the greatest importance to the prevention of venereal diseases. It is suggested that this provision is one which could most suitably be undertaken by ship-owners' and seafarers' organizations, supported where desired by the local authority, and voluntary organizations for the promotion of social welfare, at each port,

(10) That a copy of these resolutions be communicated to the Governments of all maritime nations, to the League of Nations, and to the Red Cross Societies of the world.

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## Venereal Disease Conference in Newark

THE conference on the diagnosis and treatment of gonorrhoea and syphilis, conducted in the Newark City Dispensary and Hospital under the auspices of the Venereal Disease Bureaus of the State and Newark City Health Departments, were attended by approximately one hundred and fifty physicians from New Jersey, New York and Pennsylvania.

### THE WEDNESDAY MEETING—SYPHILIS.

The first session began with an exhibition of seventy stereopticon slides illustrating the cutaneous manifestations of syphilis, some of which are but rarely seen to-day because of the improvement in the methods of diagnosis and treatment. Dr. Howard Fox, Clinical Professor of Dermatology at the New York Polyclinic Medical School, and Chairman of Section of Dermatology of the New York Academy of Medicine, discussed each of the pictures as shown.

Dr. Mihran B. Parounagian, Director of the Department of Syphilology at the Bellevue Hospital and Medical College, described the routine treatment of syphilis as conducted in the Bellevue Clinic and discussed the administration of the drugs used in the treatment of syphilis.

In the afternoon, the Newark Dispensary Clinic staff demonstrated the administration of silver and the old arsphenamine, and the injection of both the soluble and insoluble mercury salts. At this demonstration the large attendance at the dispensary syphilis clinic provided ample material for the injections and the physicians were shown the method by which this large number of patients could be handled expeditiously during the limited time of the clinic.

After a demonstration of the differential diagnosis of the *Treponema pallida* with living cultures of the organisms causing syphilis, and Vincent's angina, the physicians inspected an exhibit of the Wassermann reaction and the colloidal gold test.

The remainder of the afternoon session was devoted to a special discussion and demonstration of the technique of arsphenamine administration by Dr. Parounagian.



## THE THURSDAY MEETING—GONORRHOEA.

The second day of the conference opened with an operative clinic by members of the Newark clinic staff at the Newark City Hospital.

The remainder of the morning was devoted to practical demonstrations of the treatment of gonorrhoea and its complications as conducted in the Newark City Dispensary Clinic. This clinic has a very large attendance. The clinic management allows the maximum of attention to the individual patient by dividing the cases according to the stage of the disease, each group being treated by one of our physicians attending the clinic.

In the afternoon Dr. E. L. Keyes, Jr., Prof. of Urology at the Cornell University Medical College, confined his remarks to the fundamentals of the "Pathology and Treatment of Chronic Gonorrhoeal Urethritis." Dr. Keys pointed out the importance of obtaining a positive diagnosis in chronic gonorrhoeal urethritis, and urged the use of the complement test as corroborative evidence. He pointed out the inefficiency of surface irrigation when the infection is located below the surface of the urethra, and urged the need for genital mechanical treatment of the infected areas.

The last paper on "Some Complications and Sequelae of Gonorrhoea and Their Treatment," was given by Dr. Conlin Luke Begg, Assoc. Prof. of Urology at the New York Post Graduate Medical College and Hospital, and President of the New York Urological Association. Dr. Begg discussed the symptoms of acute gonorrhoea; urged that the patient be placed in bed if possible; that the diet be regulated; that hot baths be employed twice daily; that alkaline diuretics be employed; and that atropin or belladonna be used to control pain, when necessary. He cautioned against the use of instrumentation in acute gonorrhoea except when in the hands of a physician particularly experienced in their use.

The symptoms of posterior urethritis were discussed and the methods of diagnosis. The rectal examination of the prostate and seminal vesicles was described. Dr. Begg discussed the use of gonorrhoeal vaccines and concluded with a discussion of the treatment of epididimitis.

The conference closed with a "bedside" clinic at the Newark City Hospital where Dr. C. R. O'Crowley, Chief of the Newark Clinic, discussed the treatment of gonorrhoea cases and demonstrated the use of the cystoscope.

The conference on the diagnosis and treatment of gonorrhoea and syphilis has demonstrated the advisability of co-operative effort upon the part of municipal and state health departments in rendering a postgraduate service to the medical profession. The health authorities are stimulated by such a conference to further work. Physicians are rendered a distinct service which they appreciate, and the public is ultimately benefitted by better diagnosis and better treatment, through more enthusiastic service by the entire medical profession.

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## News Notes

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Toronto General Hospital has procured 150 milligrammes of Radium at a cost of twenty one thousand dollars.

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His Excellency, the Governor General, has consented to become Patron of the Canadian National Council for Combating Venereal Diseases.

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The Provincial Government of Saskatchewan in the recent election campaign expressed their intention to further extend their assistance to the work in the interest of the tuberculous in the Province. Immediately after their election they appointed a Royal Commission to investigate and report upon a complete programme of activities, looking towards assisting to the utmost, those afflicted with the disease, and adopting machinery which will locate the clinical cases and establish treatment, in the earliest stages of development. And institute further measures to diminish the incidence of the disease.

Sheriff Cook, of Regina, President of the Canadian Association for the Prevention of Tuberculosis was appointed Chairman, Dr. R. G. Ferguson, Medical Superintendent of the Saskatchewan Sanatorium, Fort Qu'Appelle, and Mr. Cairns of Saskatoon, are the members of the Commission.

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The Canadian National Council for Combating Venereal Diseases is in receipt of a new set of excellent educational posters issued by the British Council. Copies of these posters will be issued to the local branches of the Council as soon as an adequate supply is obtained.

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Dr. W. A. Stile of "Child Health Special," extended the privilege of the Canadian Association for the Prevention of Tuberculosis of taking part in the exhibit section of their train. This favour was much appreciated and it is hoped educational work by distribution of French and English literature, bearing on Tuberculosis, will result in material good, having been accomplished in the forty odd municipalities visited in the Province of Quebec.

A note from New Glasgow, N.S., gives interesting details as to the work carried on in the New Glasgow Baby Clinic. The clinic is a Well Baby's Clinic and was organized under the Women's Council in the summer of 1919. It is held every Thursday afternoon from 2 to 5 in the Wilson Institute where there is a nice large room suitable for the work. Miss Hannah Matheson is in charge and she is assisted by several young ladies and the Victorian Order of Nurses. Dr. John Bell, who has made a specialty of children's diseases, gives his time gratuitously to the clinic and has done a great deal to make it a success. The report at the close of 1920 showed 300 babies' names enrolled.

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The Secretary of the Canadian Association for the Prevention of Tuberculosis, was called to Regina, and permitted to attend several sessions of the Royal Commission appointed by the Saskatchewan Provincial Government to recommend a complete programme in the interest of the tuberculous. Dr. Seymour, Provincial Commissioner of Health, Miss Jean Browne, Director of Social Hygiene, Department of Education, and the Saskatchewan Provincial Council of Physicians and Surgeons, appeared before the Commission.

Marked progress has been made by the Commission, extensive survey work is already in hand. It is evident that, this Province intends to lead Canada in this particular activity.

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Dr. A. H. Desloges, Director of the Division of Venereal Diseases of the Superior Board of Health of the Province of Quebec has returned from a trip to Europe during which he took the opportunity of investigating the type of work being undertaken on the Continent for the control of Venereal Diseases.

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The semi-centennial of the American Public Health Association will be held in New York, November 8th to 18th. By a peculiar co-incidence the centennial of Dr. Stephen Smith, founder and first President of the Association approaches at approximately the same time as the semi-centennial of the Association itself. Dr. Smith is now in his 99th year.

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# Editorial

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## SOCIAL HYGIENE

**G**IVE a dog a bad name and generally he finds it hard to get rid of it. In some parts of the world at least that has been the difficulty with the term 'Social Hygiene.' It has been used so much in connection with the campaign against Venereal Diseases that many uninformed persons have come to regard Venereal Diseases and Social Hygiene as almost synonymous expressions.

As a matter of fact Social Hygiene is simply what its name implies—a condition of normality in the relation of the individual parts of society to one another. The fact that a condition of social hygiene would eliminate Venereal Diseases from the community is incidental.

A Social Hygiene movement in any country, however, if undertaken with a will to succeed must necessarily have far reaching results. In the past, notwithstanding our many political efforts, there has been no organized attempt to attain a condition of Social Hygiene. The business of countries has been undertaken by legislative bodies whose members have had national or local interests at heart rather than real human interests. The average citizen has been content to delegate his duties to his fellow men to some one whom he occasionally helps to elect to some civic or state office.

Of late there has been a new tendency. The development of Rotary Clubs and clubs of a similar type which have followed the lead of Rotary, the Grain Growers' Movement, the Farmers' Movement, although not exactly analagous to one another are all indicative of a somewhat similar spirit—a spirit actuated by a desire to deal with great organizing problems at first hand.

If a movement to organize in order to obtain the normal things of life for the average person were started on a large scale without waiting for such a condition of affairs to develop of itself at say the time of the millennium there is little doubt that a measure of success would be achieved just as it is achieved by organizations such as those mentioned above, and such an ambition would be of transcendent importance. A normal childhood, normal education,

normal recreation, normal family life, marriage at the time when nature intends it and the establishment of a home in turn by the next generation, these are things the general attainment of which would not only add enormously to human happiness but make for the stability of the state and eventually of the world at large.

Left to himself man will probably in time—after many dull shocks of experience—attain such a happy state. When he realizes that the attainment of such a condition is worth organizing and working for it will not be long before the whole complexion of the world is changed. But he must feel that the end to be attained is more important than any other of his materialistic ambitions and so act in parliament and in committee before results will be achieved.

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## Notes on Current Literature

From the Department of Information on Public Health, Canadian Red Cross Society.

### *Ten Years' Public Health Progress in Ontario.*

Dr. J. W. S. McCullough reviews the early history of public health in Ontario, outlines the progress of the past ten years and describes the present activities of the various divisions of the Board. This record will interest all health workers. Copies may be obtained on application to the Chief Officer of Health, Parliament Buildings, Toronto.

### *Child Welfare.*

Dr. Royer outlines the scope of the Child Welfare Movement in Canada and shows the relationship of this movement to the physician, the nurse, the health centre and the welfare worker. (*Pub. Health Journal*, Toronto, July, 1921, p. 289.)

### *The Housing Problem in its Various Bearings.*

A general discussion of the housing problem at the recent conferences of the Royal Institute of Public Health, London. (*The Journal of State Medicine*, Aug., 1921, p. 225.)

### *Records of Public Health Nursing.*

Dr. Louis Dublin, of the Metropolitan Life Insurance Company, emphasizes the value of nursing records and case work, administration and research. (*The Pub. Health Nurse*, Aug., 1921, p. 385.)

### *Industrial Application of Army and Navy Venereal Disease Records.*

Venereal diseases are a much greater handicap in industry than existing industrial statistics indicate. This inference may properly be drawn from the 1920 reports of absences from duty in the U. S. Army and Navy. In the former, more than 13%, and in the latter 15% of all absences were from venereal diseases. (*American Journal of Public Health*, Sept., 1921, p. 829.)

### *Mental Hygiene in Industry.*

(*Mental Hygiene*, July, 1921, p. 469.)

### *Mental Health Clinics.*

(*Mental Hygiene*, July, 1921, p. 519.)

*Functions and Relationships of Bureaux of Child Hygiene and Bureaux of Public Health Nursing in State Boards of Health.*  
(*American Journal of Pub. Health*, Aug., 1921, p. 707.)

*The Value of the Public Health Nurse in Public Health and Welfare Administration.*  
(*American Journal of Public Health*, Aug., 1921, p. 712.)

*Ravages of Congenital Syphilis and its Prevention.*  
(*I. J. P. H.*, July-August, 1921, p. 354.)

*Children Deprived of Parental Care.*

A study of children taken under care of Delaware agencies and institutions. (Children's Bureau Publication No. 18.)

#### BOOKS TO ADD TO THE LIBRARY.

1. "Healthy Mothers."
2. "Healthy Babies."
3. "Healthy Children."

By Josephine Baker, M.D., D.P.H. Minneapolis, Ma.: The Federal Pub. Co., \$7.50 a set.

Three excellent books by the Director of the Bureau of Child Hygiene in the New York City Department of Health. These books should make useful additions to the libraries of health centres.

4. "Sanitation for Public Health Nurses."

By Hibbert Winslow Hill, M.D., D.P.H. Toronto: The Macmillan Company. Pp. 211. \$1.80.

#### LEAGUE OF RED CROSS SOCIETIES—POPULAR HEALTH ARTICLES.

1. "The Health Game."
2. "The Woman's Battle."
3. "On the Abuse of the Heart."



## Book Reviews

*Types of Mental Defectives.* By Martin W. Barr, M.D., and E. F. Maloney, A.B. Cloth. Price \$3.00. Pp. 179. Philadelphia: P. Blakiston's Sons & Co. 1920.

The authors of this little book are evidently of the belief that information about mental defectives can be imparted profitably by a presentation of case histories. We are therefore treated to one hundred or more clinical abstracts, and are able to visualize the various types that are described. This method of instruction approaches very closely an actual demonstration in a clinic or hospital and is undoubtedly of great value.

A so-called "educational" classification of mental defectives is used. Individuals requiring asylum care are designated as idiots and idio-imbeciles. Those who need long apprenticeship and colony life under protection are imbeciles, while the backward or mentally feeble are cases with slow mental processes that can be trained for a place in the world. Moral imbeciles are placed in a group by themselves and for them is advised custodial life and perpetual guardianship.

At the beginning of each chapter there is presented a brief account of the type of mental defective under consideration, and then follows illustrative cases. The introductory remarks are, for the most part, good, and might have been lengthened with advantage. Such a remark as the following about idiots is typical of the sound sense that pervades the little book: "As numbers (of idiots) can be cared for here (the asylum) more efficiently and with greater ease than can one in the ordinary family, and as the child very often does not recognize the hand that ministers to his physical wants, the mother herself is soon forced to admit that the asylum is best, not only for the good of the child, but also for the welfare of the home.

In the opinion of the writer the best chapters in the book deal with cases requiring asylum care. It is evident that the authors are thoroughly familiar with institution types and the reader can rest assured that he is being treated to authoritative advice. When on the other hand the backward or mentally feeble are discussed the authors are not so convincing. They give no place to that large group known as Dull Normals—individual who cannot be classed as

mental defectives or as normal, but who comprise a considerable proportion of the population. These Dull Normals are not backward in the sense that is conveyed in the chapter dealing with the subject.

There seems to be a demand for a book on mental defectives that will deal particularly with high grade types that can be supervised in the general community. Unfortunately, the volume under consideration fails us here. It is a pity, because the medical practitioner, teacher and social worker need information not so much about institution cases, but about high grade defectives—those unfortunates who are so often involved in social problems, and who are in need of expert guidance. The text book needed will stress the importance of an all-round personality study of each defective and in connection with treatment will give prominence to the place of vocational guidance, home discipline and the special class in the public school.

It would be unfair, however, to end this review in a vein that is hypercritical. The book as it stands is worthy of the study of all students of the subject and will form a useful addition to that section of the library devoted to mental hygiene.—C. M. Hincks.

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# The Public Health Journal

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TORONTO, OCTOBER, 1921

No. 10

## London Social Service Council Report of Public Health Committee on Infant Mortality

Committee.—Lt.-Col. Wm. M. Gartshore, Pres., London Child Welfare Association; Miss Bertha Smith, Supervising Nurse, L.C.W.A.; Dr. W. S. Downham, M.O.H., London; Mr. R. H. Sanders, Inspector, B.O.H., London; Miss Helen Tufts, Assistant Secretary, London Children's Aid Society; Miss B. D. Friend, Industrial Nurse, Sommerville Box Factory; Dr. H. W. Hill, Director, Institute of Public Health, Chairman.

*Continued from the September issue.*

### REPORT—MARCH 1ST, 1920, TO MARCH 1ST, 1921.

|                       | Clinics |         | Previous |         | New    | Present |
|-----------------------|---------|---------|----------|---------|--------|---------|
|                       | held.   | Attend. | Aver.    | record. | cases. | No.     |
| For Sick Babies.....  | 51      | 413     | 8        | 364     | 118    | 425     |
| For Well Babies ..... | 142     | 2191    | 15       | 273     | 385    | 658     |
| Baby Week 3 days...   |         | 457     |          |         |        |         |

Total..... 3061 conferences given.

| Cases referred to us for      |     |                              |     |
|-------------------------------|-----|------------------------------|-----|
| Instruction and Visiting.     |     | Disposal of Cases.           |     |
| By family physician .....     | 89  | Admitted to Hospital .....   | 8   |
| “ Soldiers’ Aid .....         | 22  | Referred to Out-pat. Dept.   | 22  |
| “ Children’s Aid .....        | 10  | Referred to family phy-      |     |
| “ request of mothers .....    | 86  | sician .....                 | 20  |
| Visited, came to Clinics..... | 503 | Moved away .....             | 57  |
|                               |     | Discharged .....             | 137 |
|                               |     | Died .....                   | 10  |
|                               |     | On present visiting list.... | 456 |
|                               | 710 |                              | 710 |

3 Nurses, full time—8 hour day.  
London, Ont., children born in 1920, including stillbirths ..... 1,518  
London, Ont., children died in 1920, including stillbirths ..... 208

## From Prenatal Causes—

|                                |    |                         |
|--------------------------------|----|-------------------------|
| Stillborn .....                | 56 |                         |
| Premature .....                | 30 |                         |
| At birth or condition at birth | 39 | 125 or 60% total deaths |

## From Nutritional and Feeding Causes—

|                             |    |                        |
|-----------------------------|----|------------------------|
| Definitely Nut. ....        | 27 |                        |
| Intestinal Infections ..... | 10 |                        |
| Doubtful .....              | 4  | 41 or 20% total deaths |

## From Infectious Diseases—

|                        |    |                        |
|------------------------|----|------------------------|
| Flu Pneumonia .....    | 8  |                        |
| Pneumonia .....        | 12 |                        |
| Meningitis .....       | 6  |                        |
| Other Infections ..... | 5  | 31 or 15% total deaths |

|                     |                       |
|---------------------|-----------------------|
| Miscellaneous ..... | 11 or 5% total deaths |
|---------------------|-----------------------|

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 208

London, Ont., 1919, Official Infant Mortality Rate (excluding stillbirths)—116.7 per 1,000 live births.

London, Ont., 1920, Official Infant Mortality Rate (excluding stillbirths)—104.0 per 1,000 live births.

Total loss, 1920 (including stillbirths)—137.0 per 1,000 live births.  
(3-5 of the total loss died from prenatal causes.)

## RECOMMENDATIONS.

The recommendations which naturally grow out of these studies are here summarized:

1st. Because 60% of the *total recorded loss* of infant life (including stillbirths but not miscarriages), was due to prenatal or natal causes (the former greatly preponderating) the medical profession as a whole, all interested citizens, and the public generally should direct their attention especially to the physical condition of women preceding the births of their children—particularly with regard to *disease, nutrition* and *heredity* in the broadest senses of those terms.

2nd. Because at least two-thirds of the recorded loss of infants *born alive* at full term were due to nutritional diseases, or to infectious diseases, the former largely dependent on artificial feeding as against proper nursing with human milk, the attention of all concerned should be concentrated on securing to the young infant (a) human milk, (b) protection from infectious diseases. No more startlingly misleading and often fatal teaching exists than that which implies that infectious diseases are relatively light and harm-



less in young children. The actual facts, as opposed to the traditions show that *mortality in children* from the ordinary infectious diseases is found especially at the younger ages. The vast bulk of the deaths from the infectious diseases of children occur between the ages of 1 and 7, principally before the age of 5.

3rd. That, to secure these ends, prenatal care for prospective mothers, and infant feeding for young babies, should receive every encouragement from the medical profession, citizens and the general public.

4th. That Boards of Health should receive the hearty support and intelligent co-operation of the same groups in every effort at minimizing infections of every kind.

5th. That the proper legislative and sociological methods for prevention of the marriage of the unfit should be studied with the object of preventing the reproduction of the unfit, especially of the feeble-minded.

6th. That the proper training and instruction of the fit should be provided by courses in housewifery in the public schools designed for girls from the age of 12 upwards, following the extremely successful plan initiated in New Zealand.

#### INFANT MORTALITY STUDIES.

In considering carefully the amount of "infant mortality" (deaths of infants under one year) the main object is to find how to prevent it. A mere statement of the total figures is a first step towards prevention, for these figures give the first shock, and catch the first attention of those who, not knowing the extent of the loss, have so far given it no thought. But once attention is directed to this huge leakage in human life, and great loss of prospective population, the next thing is to study the individual cases with the object of finding to what the individual losses are due, and whether or not the individual causes, operating in each instance, are of a character susceptible of restriction or of abolition.

Hence, in the groupings of causes of deaths which follow, the groups are formed and studied always with the point of view of placing together those deaths which were due to similar "immediate causes"; the similarities in the causes being based, not on similarities in anatomical or physiological character, but on similarities in preventibility—that is, on similarities in such preceding causative conditions as are susceptible of control. Thus (confining ourselves to deaths under one year, because it is in this period that

the really enormous losses occur) we first separate those children born dead from those born alive who afterwards died, and we do this because those who died before birth must, as a class, have died from immediate causes differing in degree or in kind from the immediate causes which produced death after birth. Taking now only those born alive, we separate those born alive prematurely from those born alive at full term because it is obvious that those born prematurely enter the outer world under a different set of conditions from those born at full term, the former having an initial handicap, first, from those conditions which resulted in the premature birth; and, second, from the mere fact of prematurity itself.

Hence stillborn children, and premature children who die, call for the exercise of preventive measures that antedate birth—prenatal measures. Even those children who are born alive at full term may sometimes succumb later from prenatal cause, although the operation of prenatal causes in their cases is obviously not so extreme as in the previous classes. Nevertheless, the operation of prenatal causes in the deaths of children born at full term is evident in some cases; and this is particularly true of the deaths of full term children who die *very soon* after birth. So true is this that classification by age of the deaths of children born at full term corresponds in a general way with a classification by cause; for the deaths at the younger ages usually have causes more or less due to prenatal conditions and more or less closely allied to those producing prematurity and stillbirths; while the deaths at the older ages usually have causes due rather to post-natal conditions—malnutrition and infection.

With this introduction we may give the actual figures for London in 1920, as based on the returns of births and deaths made by physicians to the local Registrar, Mr. Samuel Baker, who is also the City Clerk. These returns were transcribed by Miss Bertha Smith, Supervising Nurse of the Londo Child Welfare Association, and worked out, in collaboration with the D.P.H. and C.P.H.N. candidates at the Institute of Public Health by the Director.

They are therefore as correct as such figures reasonably can be, and have received close scrutiny from many critical eyes before reaching their final form as here presented.

CHILDREN UNDER ONE YEAR OLD—TOTAL RECORDED LOSS=13.7%.\*

Total number of children born 1920 (including stillbirths, premature and full term living births)=1,518.



Total number lost by death under one year (including stillbirths, premature and full term living births)=208.

Percentage loss=13.7%, or 137.0 per 1,000.\*

TABLE I.

Total Recorded Loss Classified.

|   | Number. | Per cent. | Proportions<br>under 1 year. |
|---|---------|-----------|------------------------------|
| Premature children dying.....=                            | 30      | 14.4%     | 1-7 of total deaths          |
| Stillborn (Prem. or full term)=                           | 56      | 27.0%     | 2-7 of total deaths          |
| Born living at full term but<br>dying within a year ..... | 122     | 58.6%     | 4-7 of total deaths          |
|   | 208     | 100 %     |                              |

Thus the premature births form about 2%, the stillbirths about 4%, the later deaths under one year about 8% of the *total births*.

#### COMMENTS ON TABLE NO. I.

From the standpoint of preventability of death, the total children recorded as lost by death in London in 1920 (208) divide themselves quite naturally into three main groups. The first group consists of the stillborn children (56). Their deaths were obviously due to causes which must necessarily have developed and been in operation *at or before birth*. The second group consists of the premature children who died (30). Their deaths were obviously due in part to causes which had developed and operated *at or before birth* (those causes which resulted in the premature birth); in part to these same causes, *continuing to operate after birth*; in part to causes developing and operating after birth. The third group consists of the full-term children who died (122). Their deaths were due in some cases, it is true, as in the last groups, to causes developing and operating before birth; but in some cases to injuries received at birth and in some cases to causes developing and operating after birth had occurred, the latter group being the most important numerically.

Thus we recognize three general groups of causes of infant deaths—those developing before, at, or after birth; or prenatal, natal and post-natal. The causes of death in stillbirths are exclusively prenatal and natal; those in premature births, chiefly pre-

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\*This is *not* the infant mortality rate. (See p. 12.)

natal but also natal and post-natal; those of full term births chiefly post-natal, but also in some cases natal, in others prenatal.

#### UNRECORDED LOSSES.

Prenatal causes produce also losses not shown in the above recognized groups at all, and not recorded in any required register. These losses are the losses due to deaths of infants born before the seventh month of pregnancy. Such "fetal births" are generally known as miscarriages, or abortions. They constitute a loss of potential citizenry of unknown dimensions.\* They are due to very much the same set of causes which produce premature births and stillbirths. They equally require investigation, and are in part at least susceptible of prevention by like measures. But they are not recorded officially at all in infant mortality statistics.

#### LENGTH OF LIFE OF PREMATURE CHILDREN WHO DIED.

TABLE II.

Premature children who died lived for following periods:

|                        |   |                      |    |
|------------------------|---|----------------------|----|
| Less than 1 day =..... | 3 | 1 to 6 days= .....   | 8  |
| 7 to 13 days =.....    | 4 | 14 to 20 days= ..... | 2  |
| 21 to 27 days= .....   | 3 | 4 months= .....      | 1  |
|                        |   | Not given= .....     | 9  |
| Total= .....           |   |                      | 30 |

#### COMMENTS ON TABLE NO. II.

This table shows that the prematurely born who died lived as a rule so short time before death that the post-natal measures which could be brought to bear on them had no prolonged opportunity for action. (Those 9 deaths for which no age is stated may be assumed to have died very early indeed—within a day—thus making the loss within a week 2-3 of the total.) This is perhaps merely another way of saying that in these cases the prematurity itself was the great cause of death.

It would be interesting to know *how* premature the various premature children were, i.e., to know the (intra-uterine) "age at birth." Unfortunately this is seldom if ever recorded and the systematic reporting of this "age at birth" is *the first of the improvements in birth registration which should be kept in mind for the future.*

\*Morgan, of Toronto, estimates miscarriages as about double the number of stillbirths.



The cause of death in those dying after premature birth is almost always omitted, but should be recorded in all cases, and the making of such records constitutes *the second of the improvements we would urge*.

In most of the premature cases in London we are left ignorant on the two points.

Concerning stillbirths also the cause of death is practically never given—probably is seldom determined or indeed determinable, without an autopsy. Seldom is the distinction made clearly between stillbirths of premature children and stillbirths at full term. (Premature children, stillborn, are usually registered as stillbirths, not as premature.)

*The third improvement* would consist therefore in reporting the (intra-uterine) "age at birth" of stillbirths; *the fourth would be*, the reporting of the causes of stillbirths. *A fifth and exceedingly important* improvement, the carrying out of which would yield an immense amount of invaluable information, of an exact character, is one in which both physician and parent should co-operate in the interests of the race, namely, the *performance of an autopsy* in every case of early death, whether the child be premature or still-born.

The reasons for urging very strongly this turning of attention to premature and stillborn infants may be summarized thus:

(a) The great percentage which losses under these heads now form of the total loss—over 40%. Surely no group of this size should escape minute attention.

(b) The susceptibility of this group to reduction by preventive measures, directed to the care of the mother, medically, surgically and through hygienic and sanitary channels. An accurate knowledge of the causes would lead to specific measures to prevent their operation.

(c) The fact that consideration of this group leads to consideration of that phase of infant welfare which aims at the elimination from reproduction of the unfit for reproduction, particularly of those who produce children defective mentally, as well as those who produce children defective physically or hopelessly diseased.

LONDON INFANT MORTALITY—OFFICIAL RATE=104.0 PER 1,000  
BIRTHS.

*The official infant mortality rate.*

|   |       |
|---|-------|
| Total births (excluding stillbirths) .....              | =1462 |
| Total deaths under 1 year (excluding stillbirths) ..... | = 152 |
| Hence infant mortality rate=104.0 per 1,000 births.     |       |

## COMMENTS ON "LONDON INFANT MORTALITY—OFFICIAL RATE."

The "infant mortality rate" is a figure used the civilized world over for the comparison of the infant mortality of different places. It is figured always on the basis of the total living births for one year (disregarding stillbirths entirely, but including both premature living births, and full term living births). The deaths for the same year of premature and full term children under one year of age (disregarding stillbirths entirely) are then expressed as a fraction of the total births on the basis of so many deaths per 1,000 births.

To arrive at this infant mortality rate for London in 1920 it is necessary therefore to take the total births for 1920 (1,518); subtract the stillbirths (56), and thus find the accepted living birth total (1,462); then to take the total deaths under 1 year for 1920 (208); subtract the stillbirths (56), and thus find the accepted death total (152); the official infant mortality rate for 1920 is then the fraction  $152/1,462$  expressed on the basis of 1,000 or 104.0 ( $=10.4\%$ ).

This figure indicates that over 10% of all children, born alive in London in 1920, whether premature or full term, have died or may be expected to die within the year of birth.

It is evident, of course, that premature babies born alive have much less chance of survival than full term babies born alive, other things being equal, so that it is of interest to know what percentage of the full term babies survived. This figure is obtained by subtracting from the total deaths, both stillbirths and prematures, and of course making the same deductions from the total births—then working out the percentage as before.

There is still one more consideration; the full term births (excluding stillbirths) included a certain number of children born alive but who were born deformed, or were injured at birth in various ways to an extent which made prolonged life impossible. Such maldevelopments may range from absence of the head to non-closure of the fetal valve-opening in the heart, and include almost every conceivable defect; while the injuries may similarly be of almost any description.

Maldevelopment must of course be due to prenatal causes, although just what the character of the causes may be is by no means always clear. Injuries at birth, although sometimes avoidable, are by no means always so. If, however, we are to discover the losses that are clearly due to post-natal causes it is necessary to eliminate both maldevelopment and injuries at birth.



As recorded these totalled for maldevelopment 17 and for injuries at birth 2 or 19 in all. Subtracting these from the 122 deaths of full term children born alive, 103 remain, or just about 50% of the gross total (208). But this is not yet the whole story.

#### PRENATAL AND NATAL CAUSES.

Maldevelopment is a very definite result of prenatal causes; but by no means the only one. Thus extreme weakness due to natal or prenatal causes is not uncommonly reported as a cause of death in a child not obviously maldeveloped. If we take *all* the deaths recorded as due to prenatal and natal causes together, we find that they total 39; these together with the stillbirths (56), and the premature (30), which are clearly prenatal, make 125 out of a total of 208, which is about 60%. The vast majority of these are obviously of prenatal, not natal origin.

TABLE III.

Infant deaths in London, 1920, from Prenatal and Natal causes.

|                      |   |    |
|----------------------|---|----|
| under 1 month .....  | = | 31 |
| 1 month .....        | = | 3  |
| 2 months .....       | = | 2  |
| 3 months .....       | = | 1  |
| 4 months .....       | = | 1  |
| 5 months .....       | = | 0  |
| 6 to 12 months ..... | = | 1  |
|                      |   | 39 |

The deaths from post-natal causes remain then as about 40% of the total loss, and it is only this 40% that can be regarded as wholly dependent, as a rule on the after-care of the child. Even this relatively small number is subject to the fact that some of the deaths included in it probably were due at least indirectly to prenatal causes.

#### POST-NATAL CAUSES.

Approximately 40% of the total loss of children in London has been shown as above to be due to post-natal causes.

The main post-natal causes may be classified as those related to nutrition and those related to infection. In the cases of death reported as due to intestinal trouble it may be difficult to say how much is due to nutrition, how much to infection, so that intestinal cases may be subdivided into those clearly stated as nutritional, those clearly stated as infectional, and a third group in which doubt

remains. (Note.—Of the 83 deaths due to post-natal causes, 72 only could be classified; in the others, indefinite terms were recorded, giving no real clue to the proper classification. See also footnote 3, table 8.)

POST-NATAL CAUSES CLASSIFIED.

TABLE 4

|   | 1st<br>mo. | 2nd<br>mo. | 3rd<br>mo. | 4th<br>mo. | 5th<br>mo. | 6th<br>mo. | 7th<br>mo. | 8th<br>mo. | 9th<br>mo. | 10th<br>mo. | 11th<br>mo. | 12th<br>mo. | Total |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------|
| Definitely<br>nutritional..                           | 6          | 5          | 5          | 2          | 4          | 2          | 2          | 1          | 0          | 0           | 0           | 0           | 27    |
| Infectional....                                       | 6          | 4          | 0          | 1          | 7          | 2          | 1          | 2          | 2          | 3           | 2           | 1           | 31    |
| Intest.<br>(infect.)....                              | 1          | 0          | 1          | 1          | 1          | 0          | 0          | 1          | 2          | 0           | 0           | 3           | 10    |
| Intest.<br>(doubtful)..                               | 1          | 0          | 0          | 2          | 1          | 0          | 0          | 0          | 0          | 0           | 0           | 0           | 4     |
| Total deaths<br>(with "un-<br>stated" 3)=<br>122..... | 47         | 12         | 8          | 7          | 14         | 5          | 6          | 4          | 5          | 3           | 4           | 4           | 72    |

The approximate percentages of the nutritional, infectional, etc., deaths in each month to the total deaths all causes per month is as follows:

TABLE 5. (Same facts as in Table 4 in percentages)

|                                   | 1st<br>mo. | 2nd<br>mo. | 3rd<br>mo. | 4th<br>mo. | 5th<br>mo. | 6th<br>mo. | 7th<br>mo. | 8th<br>mo. | 9th<br>mo. | 10th<br>mo. | 11th<br>mo. | 12th<br>mo. |
|-----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| Definitely                        |            |            |            |            |            |            |            |            |            |             |             |             |
| Nutritional.....                  | 12.5%      | 42         | 62         | 28         | 28         | 40         | 33         | 25         | 0          | 0           | 0           | 0           |
| Infectional.....                  | 12.5       | 33         | 0          | 14         | 50         | 40         | 16         | 50         | 40         | 100         | 50          | 25          |
| Intest. (infect.)...              | 2.0        | 0          | 12.5       | 14         | 7          | 0          | 0          | 25         | 40         | 0           | 0           | 75          |
| Intest. (doubtful),               | 2.0        | 0          | 0          | 28         | 7          | 0          | 0          | 0          | 0          | 0           | 0           | 0           |
| Percentage of<br>total deaths.... | 29.0       | 75         | 74.5       | 84         | 93         | 80         | 49         | 100        | 80         | 100         | 50          | 100         |

This table is chiefly of interest in showing that in the earlier months the nutritional causes are of greater weight than the infectional, but the latter gradually catch up to, outstrip and tend to replace the nutritional as age increases. This is strikingly shown in the following table.

CAUSES OF DEATH DURING THE FIRST FIVE YEARS OF LIFE  
(Excluding stillbirths and premature births)

TABLE 6

|                             | 1st year | 2nd year | 3rd year | 4th year | 5th year |
|-----------------------------|----------|----------|----------|----------|----------|
| Definitely nutritional..... | 27       | 0        | 0        | 0        | 0        |
| Definitely infectional..... | 31       | 16       | 7        | 5        | 3        |
| Intest. (infect.).....      | 10       | 0        | 0        | 0        | 0        |
| Intest. (doubtful).....     | 4        | 1        | 0        | 0        | 1        |
| Total deaths.....           | 122      | 20       | 7        | 5        | 4        |



TABLE 7.  
(Same facts in percentages)

|                             | 1st year | 2nd year | 3rd year | 4th year | 5th year |
|-----------------------------|----------|----------|----------|----------|----------|
| Definitely nutritional..... | 22%      | 0        | 0        | 0        | 0        |
| Infectious.....             | 25       | 80       | 100      | 100      | 75       |
| Intest. (infect.).....      | 8        | 0        | 0        | 0        | 0        |
| Intest. (doubtful).....     | 3        | 5        | 0        | 0        | 25       |
|                             | —        | —        | —        | —        | —        |
|                             | 58       | 85       | 100      | 100      | 100      |

Taken with the previous table it is easy to see that after the first year of life infection supplies the great causes of death, malnutrition as a cause of death being confined in its operation almost wholly to the first year of life and largely to the first eight or nine months.

TABLE 8

SUMMARIZING PREVIOUS FIGURES and showing the percentage of total deaths of children at a given age, up to 5 years old, who die at that age. (NOTE.—The estimations of the total children living at each age, above the first year of life, in London, are approximations based on the age distribution figures for Canada census of 1911.)

*Total Losses Under 5 Years of Age*

|                     | Total living <sup>a</sup><br>at age given.<br>(In first year,<br>total births<br>inc. stillbirths) | Deaths at<br>age given.<br>(In first<br>year, inc.<br>stillbirths) | Per cent.<br>of deaths<br>to living | Chief causes<br>of death.   | Percentage<br>of total<br>loss under<br>5 years |
|---------------------|--|--|-------------------------------------|---|---|
|                     |  |  |                                     | No. Dying<br>(inc. stillb'ths)  |   |
| In first year.....  | 1,518  | 208  | 13.70%                              | 125 prenatal<br>and natal<br>42 nutri-<br>tional <sup>b</sup><br>41 infec-<br>tional <sup>b</sup> | 50%<br>17%<br>17%<br>84% <sup>1</sup>           |
| In second year..... | 1,300  | 20   | 1.54%                               | 17 infectious   | 14%   |
| In third year.....  | 1,300  | 7  | 0.54%                               | 7 infectious  |   |
| In fourth year..... | 1,300  | 5  | 0.39%                               | 5 infectious  |   |
| In fifth year.....  | 1,300  | 4  | 0.31%                               | 4 infectious  |   |

<sup>1</sup>Prenatal and natal causes (inc. stillbirths) furnish 50% of total loss under 5 years.

Nutritional causes furnish 17% of total loss under 5 years.

Infectious causes furnish 31% of total loss under 5 years.

<sup>2</sup>If stillbirths be excluded the first line of the above table will read for

1518 208 13.70 125 42 41 50 17 17 =84%  
substitute 1462 152 10.40 69 42 41 36 22 22 =80%

also, the 14% in last column will read 19% and the note<sup>1</sup> will read prenatal and natal causes (excl. stillborn) furnish 36% of total loss under 5 years.

TABLE IX.

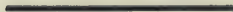
This table emphasizes the fact of the concentration of deaths at early stages in the babies' lives :

|  |   |     |   |   |   |  |
|--|---|-----|---|---|---|--|
| Deaths before the 1st month of normal life       |   |     |   |   |   |  |
| (stillborn and premature)..... = 86              |   |     |   |   |   |  |
| Deaths in the 1st month of normal life..... = 47 |   |     |   |   |   |  |
| "  | " | 2nd | " | " | " | ..... = 12                                     |
| "  | " | 3rd | " | " | " | ..... = 8 1st 3 months = 153                   |
| <hr/>  |   |     |   |   |   |  |
| "  | " | 4th | " | " | " | ..... = 7                                      |
| "  | " | 5th | " | " | " | ..... = 14                                     |
| "  | " | 6th | " | " | " | ..... = 5 2nd 3 mons. = 26; 1st 6 months = 179 |

Nutritional causes furnish 22% of total loss under 5 years.

Infectional causes furnish 40% of total loss under 5 years.

<sup>3</sup>Of the 83 deaths clearly not due to prenatal or natal causes 72 give definite information permitting classification as above. We may assume that the remaining 11, for which indefinite causes were given, may be divided on the same basis.





# A Toronto Experiment

BY A. M. GOULDING, M.D.

Physician in Charge Infants' Home, Toronto; Clinical Assistant, Hospital for Sick Children, Toronto

Read before the Section of Child Hygiene, Canadian Public Health Association, May 1921.

THE lot of the orphan or dependent child has always been hard. From the earliest times the orphan has been the type quoted when it was desired to rouse pity and charitable emotions in the hearer. Unfortunately the practical form taken by these emotions in the effort to benefit the orphan has not always been for the best. The easiest, commonest and perhaps also the earliest method of dealing with such children was to house them in Orphan Asylums. Careful records are not easy to keep, but the few that have been kept show in a way how moderate was the success that attended these efforts. For example—the London Foundling Hospital was a worthy charitable institution of the 18th Century. Here one placed an infant in a basket that always hung outside the front door, one rang the bell and departed. The infant was taken in, and generally also departed in a short time. In 1756 this hospital announced that during the previous four years 14,934 children had been received. Of these 10,389 had perished in early infancy—a mortality of 68%. So much for the 18th century—now for the 20th.

Chapin,<sup>1</sup> writing in 1915, reported the averaged annual rate of deaths to admissions in the infant asylums of the eleven largest cities of the United States—the averages covering from four to 20 years according to the reliability of the records. The mortality rates ran as follows:—New York, 51%; Boston, 40%; Buffalo, 40%; others, 60 per cent., 31 per cent., 75 per cent., 68 per cent., 65 per cent., 47 per cent., 36 per cent., 49 per cent. On the whole the 18th century does not suffer much by the comparison. The mortality in these cases was chiefly in cases under one year. In the institution in 1907 there were 320 admissions; of whom 147 died under one year, and 18 between one and two years. Some years ago Dr. Barnardo's Society in England built their "Babies Castle"—in the country—and fitted it with everything needed for

<sup>1</sup>Jour. Am. Med. Ass. Vol. 64, No. 1, 1915.

the welfare of 100 infants. The mortality rate was not quoted, but after a short time the Castle was turned over to the older children and the surviving infants removed. Dr. Miner Hall in April of last year quotes San Francisco records for their foundling institutions showing a mortality of 50%. Among boarded out cases of the same type the mortality was 12%.

Of Boarding Out schemes the best known is probably the Speedwell Unit System, started by Dr. Chapin in 1902 at Morristown, N.J., and later extended to other suburbs of New York. A unit is a certain district either in town or country noted for general healthful conditions. In this district are certain selected foster homes where infants may be boarded out. The infants are kept as long as their condition requires it; and their welfare is supervised by a salaried physician and nurse who make frequent periodical visits. There is also a committee of local women who do much to help the supervision and also something towards financing the homes. The daily cost in 1919 was \$1.23 per capita, and this included the services of doctor and nurse, and \$18.00 a month for the foster mother.

The improvement of even the most ill-nourished infants under this treatment has been very striking and many lives are now being saved that would otherwise most certainly be lost.

To set against this picture we have the paper by Hess on Institutions as Foster Mothers, 1916.<sup>2</sup> He describes conditions at the Hebrew Infant Asylum of New York which cares for 400 children under the age of 5.

The institution is a model one,—separate cubicles for all admission cases, one nurse to every five infants, a modern milk laboratory and even a wet nurse to provide breast milk to cases that need it. This last luxury is one that most infant hospitals have to do without! He admits that “cross infections” are a serious menace, but by having dressing rooms arranged to avoid close contact, by keeping infants and runabout children separate, by masking all persons with colds, and by running the place one hundred per cent. efficient he manages to keep the mortality down to 16% for cases under one year, and to 8% for cases from 1 to 5. He points out that there are bad foster homes as well as good ones. He claims that milk laboratories and scientific infant feeding are unavailable for the boarded out child. He declares that the term “Hospitalism” means merely a lack of proper accommodation, in-

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<sup>2</sup>Arch. Pediatrics. Feb. 1916.



adequate and inefficient nursing, and incompetent medical attention. He quotes cases returned from foster homes in a poor condition who have thrived amazingly in the asylum and he finishes by claiming that it is not the infant under one year who fails to thrive in institutions but the young child from one to five. It will be seen that he differs absolutely from Dr. Chapin, though he admits that cases in the admission cubicles—one to each cubicle—do very much better in the open wards. The analogy between the individual cubicle and the individual foster home does not seem to occur to him. It is, moreover, on record, 1918, that the New York State Board of Charities considers the death rate of institutional children under two years to be five times that of other children of the same age and in the same area.

The Toronto Infants' Home has occupied its present position and building since 1881—40 years. Some years ago, a new wing was added which combined most of the defects of the old building with some new ones of its own.

The object of the home was primarily to provide shelter for destitute mothers with their children, under four years of age, and incidentally also for destitute children themselves. The ideal was an excellent one. Mother and child were kept together while the other children had the benefit of motherly care as well. Where necessary it would help raise the moral tone of the mothers by providing them with useful domestic tasks, and at the same time prolong the period of breast feeding.

As it worked out, this ideal was somewhat modified. Many of these destitute mothers were unmarried, and some of them were a thoroughly bad lot. Others were pathological cases—mental and moral defectives. The effect of a few such on the rest of the inmates was marked. Many of the mothers were in poor health and the effect of the household tasks instead of raising their moral tone merely dried up their breast milk so that their infants missed the one advantage the home had to offer. As to the motherly care given to the other children,—the less said the better. Infant nursing is a highly skilled art, requiring intelligence, training and goodwill, all of which were frequently absent. The rule which excluded all infants under six months unless accompanied by their mothers was always being broken, and the home was seldom without a few miserable foundlings, most of whom promptly died.

My first information of the Infants' Home—only three years ago—was of a rather awful place on St. Mary's St., where they took Illegitimate Children and Mental Defectives, which any wise

physician carefully avoided. There was some poetic exaggeration about this, as I found when I joined the staff 18 months ago, but at least it expressed the popular opinion of the Home. That opinion I may say still persists.

The medical problems of the Home as we found it in December, 1919, were of two classes—those connected with the cumbersome old building and those connected with the personnel.

Among the first group were the impossibility of proper isolation of admission cases and of the sick, due to the lack of cubicles or small wards. The primitive lighting and heating systems—it is still almost hopeless to try and keep the infants' wards at a temperature of 65°; it usually ranges from 70° upward. The normal requirement of cubic air space—about 500 cubic feet per patient—still rarely reached.

There is no system of ventilation other than by the windows, and if they are open several victims in each ward get half frozen in winter.

The milk laboratory where the individual feedings are made up is quite inadequate and we were never sure which baby would get which feeding. The one small room where all the infants are bathed was generally used as a ward as well. The difficulties of getting the children out of doors are so great that it was not unusual for children to remain indoors for six months at a time. Finally the work and expense of merely keeping up the building was so heavy that little cash and less energy was left for the actual care of the children themselves. Most of the foregoing difficulties remain—but the surprising thing is the difference in results that followed a general reorganization of the personnel.

The greatest problem in the Home, as it is in any institution caring for children, was and is the nursing service. In these days, with every hospital competing for nurses and nursery maids, the problem was not an easy one to meet. Trained nurses were practically out of the question, except for emergency work. They were an expensive luxury. If they were good they usually found some reason for going back to private nursing after a short time. Many of them I regret to say were not good, and they also went. We early found that the infants must not be left to the unskilled efforts of the mothers, and for them we have relied on the semi-trained nurses, under the careful supervision of the head nurse. We have also started a course for semi-trained nurses, and these pupil nurses have proved very satisfactory. The mothers help



with the older children, with the everlasting housework, and of course with the care of their own infants.

There has been a great change in the general attitude of the mothers. I think all the old hard cases have been weeded out by now—and undesirables do not find easy admission. Thanks to the personal influence of the Superintendent and Head Nurse the home has lost most of its prison-like characteristics, and the change of heart on the part of the institution has been met more than half way by the mothers in it. The errors in nursing technique which we now meet are usually due to lack of knowledge, not to the wilful carelessness amounting almost to "sabotage" which before was so common and so disastrous. We still have respiratory infections occasionally passed from one child to another, but on the whole our record is not much worse than that of the average hospital. The medical care of the Home was formerly in charge of a large staff, one of whom was on duty every month. It is now in charge of a small staff on duty all the time.

The present medical staff took over in December, 1919—hoping to accomplish great things by reforming the institution. After six months they were ready to try anything that offered a way out. In July of last year the Boarding Home experiment was started and it has been going now for ten months. Our previous head nurse was appointed officer-in-charge of Boarding Homes and told to go ahead. She did. She hunted out the homes and inspected them,—converted and instructed the prospective foster mothers, transported the children, and kept an eye on the running of the homes as long as the children were there. The work was cumulative. In the first three months six children were boarded out. In the next six months 121 children were boarded out.

We learn from Dr. Hess that many foster homes are worse than institutions. We were told by a New England expert that only 10% of their prospective homes were accepted by the child-placing agencies. But we remembered Dr. Chapin's advice about not being too fastidious, so we went ahead. We have no long-time statistics to show—but in 10 months we have taken on 49 paid foster homes, and of these only three have been thus far rejected. Some homes are in the city, many are outside the city limits, and some are as far removed as Bowmanville and Aurora. In these cases a local physician supervises the conditions. The limit for the best homes is two infants and one child. A sickly infant has a home to itself.

The Toronto homes are visited twice a month by our own nurse, once a month by the public health nurse, and once a month the

children are taken to the nearest well baby clinic. The children are thus seen once a week at least and if anything goes wrong our nurse makes a daily visit. If a child becomes acutely ill it is sent at once to the Hospital for Sick Children. This policy is coming to be followed more and more with all cases in the Home.

*Results.*—The boarding out system is an expensive one—especially at present while we have to keep up the big institution as well. The cost averages about \$1,200.00 a month, in addition to a regular monthly budget of about \$3,000.00.

Does it pay? The records for the past 21½ years may give the answer:—

1918-19—Admissions 183, deaths 96—mortality rate 52%.

1919-20—The year the present staff took over—admissions 390, deaths 71—mortality rate 18%.

1920-21—Half year ending March 30th—Boarding Homes in operation; admissions 294; children boarded out 121; deaths 10—mortality rate 3.4%.

To me this result seems far too good to be true—but those are the figures. The Home is doing three times the work it did in 1918, and the death rate has dropped from 52% to less than 3½%. In the light of our experience I do not believe the case against Institutional Care of Children even merits serious discussion. Institutions for other than mental or physical defectives belong to a past age, and the sooner they are converted to some useful purpose the better for the inmates.

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# Malnutrition in School Children\*

BY CHARLES S. MACDOUGALL.

THE problem of malnutrition of school children is, at the present time, occupying the attention of those interested in child welfare and education.

We realize that it is essential to have a well-developed body in order to get the fullest mental development. The problem of the under-nourished child, therefore, demands the attention and co-operation of the two groups, namely, "Medicine" and "Education," working in conjunction with each other.

Malnutrition is a definite entity, and in general terms, it is defined as a chronic condition characterized by a failure of the body to assimilate food and gain properly in weight. Like all other conditions it has its causes, and in the examination of a large number of advanced cases referred to the nutritional clinic at the Hospital for Sick Children, Toronto, we find the following causes predominate:

## 1. *Improper Feeding.*

This condition usually extends over a long period of time. Many of the children have no system to their living and one finds meals irregular, food poorly chosen, and improperly prepared. Pie, cake and tea find a predominant place in the diet, with such essentials as milk and vegetables treated with indifference by the child.

## 2. *Diseased Tonsils and Adenoids.*

Many of these cases are only detected by watching the tonsils over a period of time at weekly intervals. Slight gains are noted between attacks of nasopharyngitis with a rapid loss during the attacks. Improvement begins as soon as the tonsillar bases are healed following removal of both tonsils and adenoids.

## 3. *Carious Teeth.*

On observing the effect of carious teeth one soon finds the appearance of alveolar abscesses. The gain with carious teeth is slow and its duration is uncertain.

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\*From the Malnutrition Clinic, Out-Patient Department Hospital for Sick Children, Toronto.

#### 4. *Severe Infections.*

Influenza and infectious diseases are the ones most commonly found. In the most of these cases one feels the malnutrition existed prior to the disease, and the patient stood the infection poorly, thus directing the parents' attention to the malnutrition and alarming them to such an extent that treatment was sought.

#### 5. *Chronic Diseases.*

Families with positive tuberculin skin tests seem to do poorly, particularly if the tonsils and adenoids are in a chronically inflamed condition.

#### 6. *Intestinal Parasites.*

Many of these cases pass undiagnosed, and it is not until the stools are examined over a period of days that the small pin worms are found.

#### 7. *Nervously Unstable Child.*

The child is usually the only child in the family. He has been pampered at home and he re-acts poorly when in new surroundings with other children at school.

The diagnosis of malnutrition is made by the signs and symptoms presented. We find the child usually has the following signs and symptoms:

1. Underweight 10% for his height. This determination is made by the measuring rule and the scales.

2. *Irritable.*—He is disagreeable in his sports and inclined to be disobedient.

3. *Languid.*—He looks unhappy and does not become enthusiastic in his games.

4. *Pale.*—He has a sallow, pasty appearance with dark circles under the eyes.

5. *Lacking in proper muscular tone.*—His muscles have a tendency to be flabby and you find the normal body curves accentuated—(stooped, round-shouldered, etc.)

6. *Poor in his power of concentration.*—His interest can only be stimulated for a short period. The mental exertion of following a more active mind is too much for him and you find him soon in a listless attitude, as though dreaming.

Having diagnosed the condition of malnutrition, we now proceed to the problem of treatment. This phase of the work is approached in the most logical way by aiming to—



1. Regulate the life of the child.
2. Correct the existing home conditions that predisposed the child to malnutrition.
3. Eradicate foci of infection.
4. Increase rest period.
5. Give proper food, properly prepared.
6. Give fresh air with properly regulated physical and mental exercise.

The treatment outlined above is accomplished in the following manner: The children are referred to the malnutrition clinic and at this clinic a complete history is taken to ascertain, if possible, the cause and duration of the under-nourishment.

Following this a thorough physical examination is made with the object of detecting foci of infection. We aim to have the mothers present, and, while we are educating the child in the way of proper living, we indirectly educate the mother. Competition is stimulated by keeping charts for each child and by the giving of prizes to children making the best gain each month.

Following the physical examination, recommendations are made for the immediate treatment or disposal of the patient as the case may be. Cases showing diseased tonsils and adenoids are referred to their family doctor, or to the nose and throat clinic. Those with carious teeth are referred to their dentist. In this manner we are able to eradicate pathological conditions. Should additional rest be advisable, the child is allotted a mid-day rest or recommended to admittance to the Forest School or the Open Air School. On some occasions additional food is prescribed as eggs and milk. After leaving the clinic, the child is not lost track of. The Visiting Nurse visits the home, and, in a tactful way, supervises the practical work of the home as outlined by the clinic. The mother is taught to properly train, feed and care for her child.

The question of malnutrition will not find a solution in the school or in the clinic. These two public benefactors serve only as sources of information and education. The battleground of malnutrition is the home, and, if the co-operation of the parents is rendered, success is practically assured. It is very essential that the child be taught how to live properly and to accustom him to a system of living, which will reflect itself on the other members of the family.

The results of the treatment of malnutrition are slow, even under favourable conditions; six months to a year is required to bring the child, and keep the child up to the standard. The main factor which will ensure results permanently is education given at

school, at clinics and particularly in the home. It is only necessary for us to persist in this movement and, before many years, our objective will be reached.

Malnutrition is a menace to the individual and a menace to the nation. We are all too familiar with the statistics of our man power compiled from 1914 to 1919, and our survey of schools shows the child power is equally as bad.

In some communities the ravages of disease in early childhood had practically made those communities unable to send strong sons to defend them.

Our efforts are being spent in prevention of disease, and to bring the nation physically and mentally into a class superior to all others.

I am indebted to Dr. Alan Brown, Physician-in-chief, Hospital for Sick Children, for the use of the material embodied in this paper.

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# The Victorian Order of Nurses

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## The Need for Co-operation between the Hospital, The Public Health Nurse, and the Community

BY MISS JESSIE FORSHAW, R.N., *Inspector, Victorian Order of  
Nurses for Canada.*

WE are all familiar with the old conception of a hospital—it was a place to go to when sickness overtook one; unfortunately the conception that the function of the hospital began and ends there still exists in the minds of many, and, moreover, it is not so long ago since our evolution from this idea that no self-respecting person would go himself, or allow any member of his family to enter a hospital for treatment. The hospitals were looked upon then more as alms-houses than as places where the benefits of scientific medical skill and intelligent nursing could be received. We could enlarge upon that old idea, but for immediate purposes it would be better to confine our attentions to the present-day opportunities of the modern hospital; we cannot help, however, but appreciate the great work that science and education have accomplished by bringing about the death of that old tradition; so that to-day we look upon hospitals as logical places for the treatment of any physical or mental derangement.

We have found the hospital to be an indispensable assistant in the development of medical science; it has been the co-worker in the advance of surgery by providing clinical material for observation, laboratories for research work, and operating theatres where such technique as will assist the surgeon can be carried out, and in addition to this the post-operative nursing of the patient. In this way the hospital accomplishes the dual service as it serves science and the individual.

The hospital has yet to serve in another way, one so diametrically opposite to what it has been doing that some very self-satisfied Boards of Hospitals and the graduates of the old school of medicine and nursing who can see only the curative principle, are apt to look upon the new conception of medical science, which, in the last analysis is the prevention of disease, as an innovation inaugurated by a few erratic individuals, and, without taking the time to study it,

give the twentieth century discovery as much discouragement as the pioneers of scientific research received in the nineteenth century.

Between communities and most of the hospitals throughout the Dominion there is a missing link, which will continue until the medical and nursing professions, hospitals and hospital boards, and the community as a whole recognize the preventive principle in caring for the health of the community. Until prevention of disease, mental and physical, is considered the standard of efficiency in medical science and community administration, just so long will we continue to build, year after year, additional wings to our hospitals and add to our taxes for the up-keep of institutions for dependents and delinquents.

The missing link, may, to a certain extent, be covered by the public health nurse, who will be the chief educator of the public as her school rooms will be the homes of the people, and her offices of administration the community welfare house.

Provided we can destroy the old idea that the hospital's sole function begins and ends with curative medicine it will be an easy matter to co-relate its function with public health activities and community welfare.

The larger city institutions have had for a number of years their Out-patient Departments, which are called dispensaries. The name itself best describes the principles under which it operates to dispense medicine or give attention to those who otherwise are unable to pay, but its chief object was to care for those who came to the dispensary, treating them from a medical viewpoint only, and disregarding the social and economic background of the individual.

When Dr. Richard C. Cabot organized the social service department in connection with the dispensary of the Massachusetts General Hospital, he realized that an opportunity existed for the hospital to serve the individual and so doing serve the community. Although organized to realize an altruistic ideal, it soon demonstrated an economic principle which heretofore had been unrecognized, but which the governments of to-day are recognizing to be the fundamental means of reducing the cost of our institutions and their up-keep. It is cheaper to prevent than to cure and in this way be relieved from supporting people who are non-producers through some physical or mental disability.

The community or the nation as a whole in endeavouring to raise the standard of health is not taking from the individual his or her rights, but is impressing upon them their duty to the commun-



ity in keeping healthy and giving to the race such progeny that the existence of the Anglo-Saxon people will not be threatened as it is to-day.

There is a great need in the rural districts of Canada, as well as in the urban centres, for the extension of the out-patient idea, but organized with more of a public health principle in view and to assist whenever possible in the social and economic readjustment of the individual. The outlying districts being sparsely settled makes it impossible for the settlers to be close to the hospital, therefore the services of a hospital must be combined with the activities of the public health nurse.

The duties of the public health nurse usually consist of caring for any emergency cases; all maternity cases should be encouraged to go to the hospitals for delivery and after-care. This, of course, is not always possible. She will follow up discharged hospital cases, which require some observation, but do not need hospital treatment and hospital bed.

Child Welfare and Prenatal Instruction will also be important parts of her work, and when school nursing is properly organized clinics will be needed in the rural districts as they are in the cities. The organization and administration of clinics is a big problem in itself and cannot be discussed here. However, it is very obvious that unless they are placed on as near a paying basis as possible, hospitals will be slow to start departments which would entail more financial expenditure unless there is an assured source of revenue for this purpose. In the foregoing lines I have not touched upon actual bedside nursing. I cannot yet see, although recognizing a difference of opinion in regard to this, how we can successfully teach public health in the home if we do not take advantage of our profession which has taught us to nurse, and by serving in times of illness those who particularly need the skill and care we alone can give. This has proven the open sesame to many homes which needed our public health teaching.

There will probably be included in this nurse's district several smaller places, so grouped that the hospital is easily accessible. Canada is fairly well supplied with well equipped hospitals, and now that roads are being constantly improved and motor transportation available, it is not necessary for every little village to have a hospital. To overcome any geographical difficulties or where distances are great, health centres can be erected which will have the Public Health Nurse in charge, but this health centre will only be a clearing station, and the larger hospitals will be the points of con-

centration when laboratory facilities are needed to assist in diagnosis and where advice or consultation with other medical men and specialists can be obtained and expert treatment given.

Without such assistance the Public Health Nurse's power for good is greatly diminished. Her function is to serve as the Watchman at the Gate, to find the physical, mental and social defects which may be retarding the development of the individual, and which so often lead to physical, mental and spiritual stagnation. After finding an individual needing care, the next step is to approach the hospital staff in order that diagnosis and treatment may be provided. We can no more expect efficiency from the public health nurse without the assistance of the hospital than we can expect an accurate diagnosis of disease without laboratory facilities.

Now as to the administration of the public health nursing service, we all recognize a correlation between the hospital and the community; therefore there should be some basis of organization whereby the interests of the hospital as an institution and its function, and those of the public health nursing service, whether it be in the form of government administration or voluntary, may be co-ordinated. The one is as equally important as the other, but are inter-dependent, and the viewpoint of the community needs to be introduced and brought to the attention of the hospital board.

If co-operation can be secured between the hospitals and communities through the medium of the Public Health Nurse and her board of directors, whether in the nature of government administrators or the voluntary worker there will be a fresh spirit of service inculcated into the activities of the hospital, a service which the community sorely needs.

JESSIE FORSHAW.

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# Progress of Venereal Disease Control in Canada

BY DR. J. J. HEAGERTY, M.D., D.P.H.,

Chief, Division of Venereal Disease Control, Department of Health, Ottawa.

THE campaign of venereal disease control has now been in operation in the Dominion for a period of a little more than two years. It will be recalled that in the year 1919 the Dominion voted the sum of \$200,000.00 per annum to be distributed among the provinces, *pro rata* according to population, for the control of venereal diseases, with the understanding that the provinces provide an amount equal to that received. It was intimated at the time that this grant would be continued until such time as the venereal disease situation proved satisfactory.

It was agreed that the campaign should comprise free clinics, hospital beds and laboratories. All of the provinces with the exception of Prince Edward Island accepted and the work has been carried on with considerable success.

Before the inauguration of the campaign, laws and regulations for enforcing treatment of individuals in an infective stage were in operation in the provinces. These laws and regulations have as their object the protection of the public. They are in the main as follows:

Compulsory modified notification, i.e., notification by number until such time as the patient fails to continue treatment when notification by name takes place.

Compulsory examination and treatment of all persons in custody and compulsory treatment of any individual in an infectious condition.

Prohibition of sale of drugs or appliances and advertisements of cures.

"It is a statutory offence to offer for sale remedies for the cure of venereal disease." Sec. 207, Criminal Code.

Exclusion of infected persons from special trades.

Right of entry.

Obligation to secrecy on the part of all engaged in the work.

Free treatment.

Prosecution *in camera*.

Non-liability of physicians to action for reporting.

The laws and regulations are being rigorously applied in the respective provinces and are of distinct value to the community.

On the legal phase of the question, Dr. E. W. Hope, of the city of Liverpool, England, in his annual report for 1920, writes: "To say that the position in regard to the prevention of venereal disease is not satisfactory would be to gravely understate the position. Only the fringe of prevention has been touched by the provision at great public expense, and under skilled guidance, of free treatment at each of the leading hospitals in the city. The diseased person may attend if he chooses and for as long as he chooses. The skill and the money expended do unquestionably result in alleviating a great deal of suffering and may to a small extent limit the spread of the disease. But the failure of the system is manifest; 50% of the patients cease to attend as soon as the grosser symptoms disappear, but long before they are free from infection. In stating this Dr. Hope adds that the system of clinics now in vogue in Liverpool is admittedly as good as any in the kingdom. Clearly, he concludes, it is a waste of public money and public effort to give treatment which fails to have results. The public health object of that treatment is not primarily to benefit the individual but to protect the public, and if, because of non-continuance of treatment, the individual remains a source of danger and infection, we have rank waste of money and of effort.

A specially appointed sub-committee of the Liverpool City Council has prepared for submission to Parliament a series of proposals which have already received the unanimous approval of the municipal authorities and the local medical profession. The aim of the clauses is to secure continuity of treatment till freedom from infection is reached in the case of every person infected with venereal disease. Such an aim involves compulsory removal to and detention in hospital in certain cases and the provision of suitable hospital accommodation for the purpose. Dr. Hope tells us that measures closely in line with these proposals have already been adopted with success in some of the British Dominions and also in the United States of America.

In Canada less than 10 per cent. of the cases fail to return before treatment is completed and of this number at least 50 per cent. finally return voluntarily. When a patient fails to return for treatment as directed, he is written a friendly letter advising him that he is not cured of his disease and urging him to return for further treatment. If he fails to return he receives a printed



form advising him to return under penalty. If he fails to comply, he is arrested. In the case of a person who had been under treatment while in custody, a printed form is given at the time of discharge enjoining further treatment under penalty. This invariably has the desired effect.

There are fifty free provincial clinics in operation throughout the Dominion. There are two types of clinics—one situated in the hospital as a branch of the outdoor dispensary; the other in office buildings. Clinics, with few exceptions, are open evenings for those unable to attend during the day. In the clinic there is a venerealogist and staff of assistants, and working in conjunction a social service nurse who follows up cases where necessary. She pays particular attention to delinquent girls, sees that they continue treatment, removes them from their environment to another city, if considered necessary, and finds employment for them. She also interviews the families of infected individuals when thought advisable and is altogether an important factor in the campaign.

Laboratories have been established in all of the provinces and these laboratories make serological and other reactions for the clinics and physicians without charge. Each clinic is provided with apparatus necessary for the immediate examination of smears.

In the month of June last, there were under treatment in the clinics, 7,424 cases of venereal disease. Of these 914 were new admissions and 6,510 were under treatment from the month of May preceding. Of the 7,424 cases under treatment, 142 were discharged apparently cured, and 207 failed to return (less than 3 per cent.). The majority of these will return for further treatment either by persuasion or compulsion. During the month there were 54 readmissions of those who had failed to continue treatment as directed. Of those apparently cured, 53 were cases of syphilis and 89 gonorrhoea.

The great majority of those under treatment will be made non-infective. Few of these under the old system of uncontrolled treatment would have been cured. Most of them would have remained foci for the spread of infection. The law against infecting others makes for continence, while in an infective stage. Legislation and clinics are very material factors in diminishing the spread of infection. The problem of venereal disease control is essentially a public health problem.

During the same month there were reported by practising physicians 1,193 cases of venereal disease. This means that there were under treatment 8,617 cases of venereal disease in the Dominion

during the month of June, and of this number 2,017 came under observation for the first time during that month.

Of the 914 new admissions to clinics there were 492 suffering from syphilis, 402 from gonorrhoea and 20 from chancroid.

Of the 1,193 cases reported by physicians there were 597 suffering from syphilis, 586 from gonorrhoea and 10 from chancroid.

It will be noted that the number of cases of syphilis reported is greater than the number of cases of gonorrhoea. This is due to the fact that many cases of old syphilis are reporting to clinics and physicians for treatment; undoubtedly the result of the campaign of education which is being conducted throughout the Dominion.

The following figures give a fair estimate of the number of infections occurring monthly in the Dominion:

#### MONTHLY REPORT.

|                | New<br>Admissions<br>to Clinics | Reported<br>by<br>Physicians | Total. |
|----------------|---------------------------------|------------------------------|--------|
| February ..... | 947                             | 1,204                        | 2,151  |
| March .....    | 713                             | 1,349                        | 2,062  |
| April .....    | 683                             | 1,221                        | 1,904  |
| May .....      | 683                             | 1,520                        | 2,203  |
| June .....     | 914                             | 1,193                        | 2,107  |

This gives the monthly average number of cases as 2,085, or roughly 25,000 per annum.

In the fifty clinics in the month of June 13,937 treatments were given: 1,914 Wassermann's were performed; 366 smears for G. C. and treponema were made and 3,498 injections of the arsenical preparations were given. Hospital clinics are treating a great many more cases than are the clinics in public buildings, due in some measure to the fact that the clinics in the hospitals have been in operation in most cases for many years and to the fact that in the final analysis there is less publicity, inasmuch as most of the hospital clinics are conducted as a part of the general outdoor department.

The campaign of education which consists of pamphlets issued by the Provincial and Dominion Departments of Health, lectures, films and exhibits, is carried out by the provinces with the aid of the Dominion Department of Health and the Canadian National Council for Combating Venereal Diseases. This campaign is carried out continuously and thoroughly in some of the provinces,



notably Ontario and Quebec, and spasmodically in some of the other provinces.

The campaign of education lacks centralization and it is a question if it would not be better to have this phase of the work placed in the hands of a central organization for the sake of uniformity and continuity of effort.

Pamphlets for sailors, pointing out the dangers of infection, the advantage of early treatment and offering free treatment in clinics which are now in operation in every Canadian port are being distributed to all incoming ships.

The clinic by rendering the greatest possible number of cases non-infective and thereby diminishing the foci of infection is at present the most important factor in the control of venereal disease.

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# Social Background

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## The Aims of Modern Social Work

F. N. STAPLEFORD, *General Secretary, Neighborhood Workers' Association, Toronto.*

**T**HAT is it all about? What are the goals to be attained and what are the methods adopted to attain them? The constituency which constitute the problem of social work consists of the unskilled and unorganized workers and their families and those others who through misfortune and other causes have physical, mental or moral handicaps, or are placed in a peculiarly defenceless position, economically or socially. The skilled and organized workman, to a large extent, except in times of exceptional depression, bargains on fairly equal terms with his employer, and has been able to make good progress in improving his position. There are, of course, here and there individuals who, through prolonged illness or other causes, fall below the poverty line, but their position is, as a rule, much more secure and they do not constitute, to any large extent, the task of the social worker. It is only in times of crisis such as the present that any large numbers of these must seek the advice and help which the Social Worker can give.

The unskilled worker is in a different position. If he has a family his wages are seldom such as to permit of savings, being in fact scarcely adequate for decent maintenance. He has seldom a reserve of more than two or three weeks, and a short illness or brief period of unemployment makes help necessary. It is not merely a matter of relief, but also of inability to secure for his family, even in normal times, various services which the social worker must supply.

There is a group still lower in the economic scale, consisting of deserted wives, the physically and mentally disabled, those where the breadwinner has suffered prolonged or chronic illness, the aged, and at the other extreme—dependent children. Still lower lurk those individuals or families who are the most unwholesome and repulsive product of modern life—those who are abject—immoral—in whom seemingly have died much that the race has come to prize as essential to humanity. Ignorance, mental or physical ill-health, and economic causes, figure much more largely however than do char-



acter weaknesses in bringing families below the poverty line, although these also are important causes.

These constitute the problem of the Social Worker. What then are his aims and ideals? The school boy said that all geometry begins with a general denunciation. Social work does not. It begins with an attempt to understand, in order to act intelligently.

The more remote aim is to build up safeguards around these classes who are thus peculiarly defenceless. Greater security of position is absolutely essential. Social workers have thus assisted in working out, and have advocated along with others the constantly growing body of protective legislation which is working a silent revolution in modern life. Minimum Wage legislation, Mothers' Allowances, Workman's Compensation are recent examples of this.

#### RELIEF AND PERSONAL SERVICE.

The more immediate object of social work is to do the immediately necessary thing. This, the public usually visions in terms of relief. The services rendered by the social worker have, however, gone a long way past the time when the social worker was simply an almoner of alms. Relief is frequently necessary, but it is a clearly dangerous thing without personal service attached to it. Much of the most valuable work done by the Association has no relief attached to it at all. To connect a family with the organizations furnishing health service, recreational facilities or spiritual stimulus; to secure legal advice, inculcate thrift and household management; to secure institutional care; where this is needed, for natural dependents such as mental defectives; these are to mention but a few of the services rendered by the Social Worker to the families and the community. To keep up family morale by friendship and good advice is certainly a valuable service. The worker brings to bear upon a family's difficulties a trained mind and a well tried and scientific method, and a way out is found in a surprisingly large number of cases.

Social work is a great educational process. Its subject matter is not books but effective living.

#### RETROGRESSION.

This winter has given to the Association such a great amount of emergency work that it was difficult to do it all with care and thoroughness. A period such as this threatens to undo much of the careful, patient work of the past. Families being built up in self-

respect and self-help suddenly find themselves faced with a situation with which they cannot cope because it is socially produced, and thus become discouraged. Every sort of human misery, from the wreck of homes to the underfeeding of children, follows in the wake of unemployment. Insecurity cuts the nerve of initiative. The fruitless search for work and the necessity of receiving relief frequently demoralizes family life.

When the unemployment situation ends there remain not only families impoverished from the material standpoint, but too frequently impoverished also in that personal capital which makes for success and good citizenship. The only effective remedy for unemployment is employment, and in this the social worker is largely helpless. There are two things, however, which we should use any influence we may possess to obtain.

(1) The speedy settling by the city of the method and organization by which it will handle its Welfare problems. The leaders of the city's social welfare work should now be in constant conference with those engaged in private welfare work for the formulation of plans for co-operation for the coming winter. The municipal authorities carry a heavy responsibility in seeing this matter is rightly and scientifically settled, and that with all speed.

(2) There should be a thorough study of unemployment insurance as a means for meeting future crises of this kind. It will be too late for this present period of depression, but it could be inaugurated to meet the next period which will inevitably come.

One thing here should be stated with all emphasis. There seems to be a little public irritation that with the coming of spring the unemployment situation should still continue. There is a sort of irrational feeling fostered somewhat by some foolish utterances of radicals that the men are out of work because they do not want work. There are, of course, always some who take advantage of a situation such as this, but the very obvious fact is that the men are not working because they can not obtain it. If there is work in the country unmarried men certainly should take it, but for the married man, without previous experience on the farm, this remedy is often impossible. Our experience has been that for the most part the men want work, and want it with an intensity and passion that those whose position is secure cannot understand.

The community has a right to expect a good deal from the social worker. It has the right to expect interest and enthusiasm in this important work. It has a right to expect absolute integrity and the most scrupulous exactitude in the handling of public funds. It



has the right to insist that the social worker keep alert and informed as to the constantly advancing standards, and be ready to co-operate with all others in the interests of the work. It has a right to demand that the worker be properly trained and qualified, and that the worker take the long view rather than a short limited view. The social worker, on the other hand, has the right to expect from the community, intelligent interest and appreciation, and sufficient financial support to put the work on a proper basis.

We do not always live up to our ideals, but there has been a steady progress towards the development of an organization through which they can be attained.

The work of the Association is a public trust which, with many mistakes, no doubt, and with difficulties and discouragements, yet with real successes and steady progress, we are faithfully attempting to discharge.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF AUGUST, 1921.

#### COMPARATIVE TABLE.

| Diseases.                       | Aug. 1921 |         | Aug. 1920 |         |
|---------------------------------|-----------|---------|-----------|---------|
|                                 | Cases.    | Deaths. | Cases.    | Deaths. |
| Small-pox .....                 | 24        | 0       | 171       | 0       |
| Scarlet Fever .....             | 114       | 3       | 173       | 4       |
| Diphtheria .....                | 264       | 28      | 273       | 36      |
| Measles .....                   | 50        | 0       | 626       | 10      |
| Whooping Cough .....            | 151       | 6       | 178       | 21      |
| Typhoid .....                   | *152      | 27      | 67        | 10      |
| Tuberculosis .....              | 213       | 139     | 192       | 129     |
| Infantile Paralysis .....       | 23        | 3       | 5         | 1       |
| Cerebro-Spinal Meningitis ..... | 3         | 1       | 6         | 6       |
| Influenza .....                 | 2         | 2       | 7         | 7       |
| Pneumonia .....                 | ...       | 83      | ...       | 96      |
|                                 | 996       | 292     | 1698      | 320     |

\*London reported 85 cases out of the 152.

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

#### COMPARATIVE TABLE.

| Diseases.        | Cases, 1921. | Cases, 1920. |
|------------------|--------------|--------------|
| Syphilis .....   | 144          | 159          |
| Gonorrhoea ..... | 175          | 204          |
| Chancroid .....  | 5            | 4            |
|                  | 324          | 367          |



## SMALL-POX CASES REPORTED.

| County.             | Municipality.  | Cases. |
|---------------------|----------------|--------|
| Brant               | Brantford      | 1      |
| Carleton            | Ottawa         | 3      |
| Essex               | Belle River    | 1      |
| Grey                | Egremont       | 1      |
| Leeds and Grenville | Brockville     | 2      |
| Nipissing           | Ferris         | 7      |
|                     | Sturgeon Falls | 1      |
| Ontario             | East Whitby    | 1      |
| Simcoe              | Floss          | 1      |
| Thunder Bay         | Fort William   | 5      |
| Timiskaming         | New Liskeard   | 1      |
|                     |                | 24     |

### VENEREAL DISEASE REPORT FOR THE DOMINION OF CANADA FOR THE MONTH OF JULY.

## CLINICS—

|   |       |
|---|-------|
| No. of cases continuing treatment from June | 7,281 |
| New Admissions—Syphilis                     | 366   |
| Gonorrhoea                                  | 408   |
| Chancroid                                   | 25    |

Total number under treatment in clinics 8,080

## REPORTED BY PHYSICIANS—

|            |     |
|------------|-----|
| Syphilis   | 619 |
| Gonorrhoea | 508 |
| Chancroid  | 14  |

Total number of cases of Venereal Disease under treatment in Dominion in July 9,221

### The Department of Health, Canada

THE following is a recent circular letter issued by the Dominion Department of Health:—

Ottawa, July 27, 1920.

Sir,—Subsection (b) of Article 10, of Chapter III., of the International Opium Convention in respect to medicinal Opium, Morphine, Cocaine, etc., which was embodied in the Peace Treaty, reads as follows:—

To require that all persons engaged in the manufacture, import, sale, distribution, or export of Morphine, Cocaine, and their respective salts, shall be furnished with a license or permit to engage in these operations, or shall make to the competent authorities an official declaration that they are so engaged.

Canada being a signatory to the Peace Treaty was obliged to pass laws in conformity to the above-mentioned requirement, and at the recent session of Parliament a Bill, known as The Opium and Narcotic Drug Act, was passed dealing with this subject.

Subsection (3) of Section (5a) of Chapter 31, of the Statutes of 1920 provides in part as follows:—

Every physician, veterinary surgeon, dentist and druggist, pharmacist or chemist shall make to the Minister as and when required, a declaration in the prescribed form, stating that he is engaged in the sale or distribution of Opium, Morphine, Cocaine, and their respective salts or derivatives, or otherwise, as the case may be.

Every such physician, veterinary surgeon or dentist shall on request furnish the Minister with any information he may require under any regulation made under this Act with respect to the drugs received, dispensed, prescribed, given away or distributed by such physician, veterinary surgeon or dentist.

Any such physician, veterinary surgeon, dentist or druggist neglecting or refusing to make such declaration in the prescribed form, or any physician, veterinary surgeon or dentist neglecting or refusing to give such information so required by the Minister shall be guilty of an offence and liable, upon summary conviction, to the penalties provided under Subsection (2) of this Section.

Penalties—A fine not exceeding One Thousand Dollars and costs, and not less than Two Hundred Dollars and costs, or to imprisonment for a term not exceeding one year, or to both fine and imprisonment.

In view of the requirements of the aforementioned Statute, we are enclosing herewith Form M-6 which should be completed and returned to the Department. All letters should be addressed to the Deputy Minister, attention of the Opium and Drug Branch.

I have the honour to be, Sir, your obedient servant,

J. A. AMYOT,

Deputy Minister.

P.S.—Retail druggists who manufacture preparations containing narcotic drugs should make application to the Department for Form M-2, on which to apply for a license as provided under the Act.



## FORM M 6

*Declaration required from Physicians, Veterinary Surgeons, Dentists, Druggists, Pharmacists, or Chemists (other than those who manufacture) who engage in the sale or distribution of Opium, Morphine, Cocaine or their Respective Salts or Derivatives.*

Subsection (3) of section (5a) of the Statutes of 1920 provides as follows:—

Every physician, veterinary surgeon, dentist and druggist, pharmacist or chemist shall make to the Minister as and when required, a declaration in the prescribed form, stating that he is engaged in the sale or distribution of opium, morphine, cocaine and their respective salts or derivatives, or otherwise as the case may be.

Every such physician, veterinary surgeon, or dentist, shall on request furnish the Minister with any information which he may require under any regulation made under this Act with respect to the drugs received, dispensed, prescribed, given away or distributed by such physician, veterinary surgeon or dentist. Any such physician, veterinary surgeon, dentist or druggist neglecting or refusing to make such declaration in the prescribed form, or any physician, veterinary surgeon or dentist neglecting or refusing to give such information so required by the Minister shall be guilty of an offence and liable on summary conviction to the penalties provided in subsection two of this section.

Pursuant to the requirements of the said Statutes, I .....

..... of the .....

Province of ..... Profession .....

do hereby declare that I am engaged in the sale and distribution of opium, morphine, cocaine and their respective salts or derivatives.

Name in full .....

Street Address .....

City or Town .....

Province of .....

Declared before me .....

This ..... day of ..... 19.....

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## News Notes

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(1) Licensing and supervision of Maternity Homes, Boarding Homes for Children, and Day Nurseries, in the Province of Manitoba, will be carried on under the direction of the Manitoba Provincial Board of Health, by the Public Health Nursing Department, beginning October 1st, 1921.

(2) Child Welfare Stations have been opened during the summer months in the municipalities of West Kildonan, St. James and the City of St. Boniface.

(3) In Portage la Prairie, a dental clinic has been recently opened, in the Child Welfare Station, with the Public Health Nurse in attendance.

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The Massachusetts-Halifax Health Commission is very active although it has only been working a year. Like most new ideas it has to be content to progress more slowly than those at the head, with a wide and great vision of its possibilities, would wish. People have to be educated to the appreciation of Public Health work. Each week sees fresh patients at each of the clinics, and as these are very often sent by those who have come and have themselves been helped, it is one of the encouragements.

At the time of the explosion in December, 1917, the people of Massachusetts subscribed a large sum of money for the relief of those who had been injured or lost their homes in that disaster. After all claims had been settled there was a large portion of this money left, sufficient to finance a big work. Dr. B. Franklin Royer, formerly Chief Medical Inspector of the State of Pennsylvania, was appointed executive officer. Admiralty House, which had been used as a naval hospital, was then empty, and through his efforts it was loaned for this work and clinics were established, which were held every afternoon and on three mornings each week. There are now between three and four hundred families on the roll. In some families there are four and five attending various clinics. Each family, as a member is first admitted to any clinic is given a number. If others come in they have the same number with the addition of b—c—etc., a letter for each member of the family attending a clinic.



There are now established tuberculosis clinics, child welfare, ear, nose and throat, dental, pre-school age, and psychiatric, and very soon posture and nutrition clinics will be opened. The child welfare are very busy clinics; each child being undressed, weighed and measured. If it has attended before, the mother dresses it again and goes to the waiting room until it is her turn to take her baby to the doctor for advice; if it is a new case, it is kept undressed, wrapped in a warm covering and in turn gets a most careful and minute examination. It is very surprising to the mother to find most of the baby's troubles can be overcome by exact and regular carrying out of the doctor's orders about feeding. They come expecting medicines and treatments. They are supervised in their homes, and if they do not know how to prepare the food advised, the nurse shows them how to do it and visits regularly as often as necessary until the mother is able to carry out instructions without assistance. The results have been very gratifying.

At the pre-school dental clinic is a very thoroughly equipped dental room, with a small sized dental chair. The city is divided into districts and each nurse looks after the public health of her district as far as she comes in contact with the families. The number of families under supervision is, of course, constantly increasing. Each time a nurse goes into a home she sees something she can discuss or advise about, and the people on the whole are very glad of her help.

The removal of tonsils and adenoids has shown wonderful results to the parents. The patients are admitted to the ward at night, operated on in the morning, and go home the second morning in the car of the commission. The results are then carefully watched.

When the nutrition and posture clinics are established, it is felt that the health programme will be quite complete, and that the children will have a chance for normal development.

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The Canadian National Council for Combating Venereal Diseases has procured for the use of its branches the American Social Hygiene Association film entitled, "Prostitution and the Police." The picture is designed for the instruction of police forces and may be procured on loan by any local branch on application.

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The Fall meeting of the Dominion Health Council was held in Ottawa on October 19th, 20th and 21st.

In future the offices of the Provincial Board of Health, Public Health Laboratory and Registrar General's Department of the Province of Ontario will be at Spadina House, Spadina Crescent, Toronto.

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A meeting of the Executive of the Canadian Public Health Association was held in Toronto, on Monday, October 7th. The St. John meeting was discussed and considerable business disposed of. Resolutions were passed urging that Health Officers throughout the country inaugurate milk campaigns. A second resolution called attention to the fact that the duties of the Minister of Health of the Dominion are divided between two departments and urge that this condition of affairs be corrected. It is proposed to urge upon the various political parties the necessity for the Minister of Health concentrating his attention upon the subject of health.

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One of the most important features of the Fiftieth Annual Meeting of the American Public Health Association is to be the Health Institute, which is to be a comprehensive course on public health procedure, given November 8-12, 1921. This Institute is not confined to members of the American Public Health Association but is open to all public health workers.

The Section on Communicable Diseases will include the venereal diseases. The program includes New Jersey State Board's Venereal Conference in Jersey City on Thursday, November 10th, on the diagnosis, treatment and control of venereal diseases at the Jersey City Hospital, and the inspection of the Genito-urinary Clinic and a discussion of the relation of the Bureau of V.D. Control to the practicing physicians. Round Table discussions of various relations of venereal diseases to public health, and the showing of moving picture films and visits to various clinics are also planned. These are to be announced and arranged by appointment. Any one planning to attend is urged to communicate with Dr. Donald B. Armstrong, Director, 370 Seventh Avenue, New York City.

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## Notes on Current Literature

### *Physical Education from the Standpoint of the Industrial Physician.*

Fatigue is the most common cause of breakage, of wastage, or poor quality of product, of accidents and of lessened production. Dr. Elliott, of the General Electric Company, advocates games during the noon hour to counteract fatigue due to monotony of occupation. (Journ. Industrial Hygiene, Sept., 1921, p. 168.)

### *The Physical Growth of Children.*

A thorough study of the University of Iowa on the following phases of child welfare:

1. The physical growth of children from birth to maturity.
2. A survey of musical talent in the Public Schools.
3. A preliminary study in corrective speech,
4. An analytic study of a group of five and six-year old children.
5. Investigations in the artificial feeding of children.
6. Child legislation in Iowa.
7. Selective migration as a factor in child welfare in the United States.

8. The mental growth curve of normal and superior children. (University of Iowa Studies, First Series, No. 50, Vol. 1, No. 1, June 1st, 1921.)

### *The Ravages of Venereal Disease.*

Presidential address by Sir James Crichton-Browne, M.D., LL.D., F.R.S., at the 34th annual conference of the Sanitary Inspectors' Association, held at Bath, England, August, 1921. ("The Medical Officer," Sept. 10th, 1921, p. 117.)

### *The Efficiency of the Present Machinery for Dealing with Venereal Diseases and the Additional Measures Essential for Effective Prevention.*

(Journal of State Medicine, Sept., 1921, p. 257.)

### *Health Centres as Seen by a Public Health Nurse.*

(Amcn. Journal of Public Health, Oct., 1921, p. 915.)

### *Public Health Nurse as an Organizer in a Rural Community.*

(The Canadian Nurse, June, 1921, p. 344.)

*Setting to Work as a Country Nurse.*

Some very practical hints for nurses conducting medical inspection of school children. (Pub. Health Nurse, Sept., 1921, p. 472.)

*The Efficiency of the Present Machinery for Dealing with Tuberculosis.*

(Journ. State Medicine, Sept., 1921, p. 264.)

*Present-day Problems in Physical Education.*

(Amen. Physical Education Review, Oct., 1921, p. 313.)

*Vocational Training vs. Occupational Therapy.*

(The Nation's Health, Sept. 15th, 1921, p. 536.)

*Medical Service as Affecting Industrial Relations.*

(The Nation's Health, Sept. 15th, 1921, p. 512.)

*Sanitary Control of Foods.*

(Amen. Journ. Pub. Health, Oct., 1921, p. 920.)

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## Current Literature dealing with Venereal Diseases

*These abstracts are available through the courtesy of the American Social Hygiene Association.*

*Viability of Spirochete Pallida in Excise Tissue and Autopsy Material.* By George R. Lacy, M.D., and Samuel R. Haythorne, M.D., *American Journal of Syphilis*, Vol. V., No. 3, July, 1921.

The authors became interested in the question of the occurrence of spirocheta pallida in dead tissue, when actively motile spirocheta were found in the blebs and organs of a stillborn congenitally syphilitic infant which had been kept in a refrigerator twenty-six hours prior to the autopsy. They conducted experiments in order to determine the time during which the spirocheta pallida remain alive in dead tissue, the criteria being the motility of the organism and its ability to transmit the disease to a new host.



Their results are summarized below:

Spirocheta kept in serum or moist tissue, either human or animal, may retain slight motility as long as three months or more. Reliable dark-field examinations can be made on tissues or fluids collected several hours previously, provided they are kept moist and cool. Complete drying is probably fatal to the spirocheta pallida, since each of the rabbits used by the experimenters failed to develop syphilitic lesions when inoculated with dried spirocheta. This is in accord with the work of Neisser. Spirocheta pallida may, and in the case of the authors did, remain virulent in autopsy material for twenty-six hours or longer.

*The Toxicity and Trypanocidal Activity of Sodium Arsphenamin.*

By Jay Frank Schamberg, John A. Kolmer, and George W. Raiziss. The American Medical Association Journal, Vol. 70, No. 26, June 25, 1921.

In parasitic disease in which specific remedies are applied to destroy the micro-organism, the value of the drug is determined by the chemotherapeutic index, i.e., the relation of the curative dose to the maximum tolerated dose. The authors have studied sodium arsphenamin and compared it with arsphenamin and neoarsphenamin. In this article, which is the third of a series on the subject, they give tables showing the toxicity and trypanocidal activity of sodium arsphenamin and also a table indicating the therapeutic indexes of the three drugs.

In summarizing, the following facts are emphasized:

1. The highest tolerated dose of sodium arsphenamin for white rats by intravenous injection was found to be from 212 to 215 mg. per kilogram of weight. The average tolerated dose of arsphenamin was 105 mg., and of neoarsphenamin 200 mg. per kilogram.
2. The smallest trypanocidal doses of sodium arsphenamin varied from 16 to 24 mg. per kilogram of weight; the smallest trypanocidal dose of arsphenamin was 5 mg. and of neoarsphenamin 9 mg. per kilogram.
3. The therapeutic dose (dosis curativa) of sodium arsphenamin was from eight to thirteen times less than the highest tolerated dose (dosis tolerata) which expresses the therapeutic index of this compound. The therapeutic dose of arsphenamin was twenty-two times less.
4. Therefore, while sodium arsphenamin possesses the low tox-

icity of neoarsphenamin, it is much inferior to both arsphenamin and neoarsphenamin in trypanocidal or curative activity.

5. The true gauge of a remedy is expressed by its chemotherapeutic index, i.e., the relation of the curative to the toxic doses.

*Results of the Wassermann Test on 1,518 Men at San Quentin Prison.* By G. W. Nagel. California State Journal of Medicine, Vol XIX., No. 5, May, 1921.

The Wassermann test was performed on 1,518 men, of which 166 or 10.93 per cent. showed some luetic insolvent. The following are some data obtained:

|  |       |           |
|--|-------|-----------|
| Married .....                                  | 39.75 | per cent. |
| Single .....                                   | 60.25 | "         |
| Admitted a venereal disease .....              | 66.27 | "         |
| Denied a venereal disease .....                | 33.73 | "         |
| Gonorrhoea only .....                          | 32.53 | "         |
| Syphilis only .....                            | 5.42  | "         |
| Both gonorrhoea and syphilis .....             | 27.71 | "         |
| Never received anti-syphilitic treatment ..... | 96.99 | "         |

Of the 166 cases, 139 men received treatment at San Quentin. The course of treatment consisted of an injection of arsenobenzol, every four to eight weeks. In the interim the patient receives mercury rubs nightly for six days, followed by a week of rest. This procedure is continued as long as signs of lues are present or until symptoms of mercurialism appear.

Up to date 77.53 per cent. have shown marked signs of improvement. A few cases remain "Wassermann fast" in spite of prolonged treatment. There is no adequate explanation for such occurrences. In this connection it may be noted that the reliability of the Wassermann tests as an indication of the patient's condition has been seriously questioned by some, it being claimed that certain cases, though actually cured, still give positive reactions. Another point of interest is that 22.3 per cent. of those who showed improvement first gave a negative reaction followed by a positive one again, before the final negative or at least a reduced Wassermann resulted.

#### CONCLUSIONS.

1. The Wassermann test should be made a routine procedure in all complete medical examinations.



2. A negative history and physical examination does not preclude the possibility of lues being present.

3. The treatment as outlined above is an effective and practically safe method of bringing about a negative Wassermann reaction.

4. Five or six injections, accompanied by mercury rubs extending over a period of from one to two years are usually sufficient to bring about the desired result.

5. A small percentage of cases show no improvement in spite of prolonged treatment.

*Syphilis in Pregnancy. The American Journal of Obstetrics and Gynecology. Vol. 1, No. 7, April, 1921.*

Now that the Wassermann test has been accepted as conclusive means of diagnosis, every case of pregnancy should have a routine serological examination, even when no suspicious symptoms are present. This might be regarded as a prophylactic measure. Gonorrheal ophthalmia is combated by a routine instillation into the eyes of every newborn child and in instances failure to do so is punishable. The prophylaxis of diphtheria is another recent development. It is said that at least 40 per cent. of syphilitic women present no objective symptoms, nor are they aware of their condition. This accounts for the widespread character of the disease and its innocent propagation. Hereditary syphilis is one of the most important factors responsible for many chronic diseases and the obstetricians must consider themselves responsible to a certain degree. The recent work of J. Whitridge Williams and others opens a field for broad study. If a study of a series of consecutive cases shows positive Wassermann reactions in four or five per cent., it is probable that the distribution is as extensive as is usually assumed. A more extensive study of this subject will do much to reduce the incidence of this disease.

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## Book Reviews

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*General Pathology.* By Horst Oertal. Cloth, \$5.00. Pp. 357.  
New York: Paul B. Hoeber, 1921.

The author has had in mind three objects: to approach the subject in the light of modern biology and to treat pathological processes as expressions of physico-chemical laws, to relate facts and present-day conceptions in their historic setting, and to visualize pathological changes as far as that is possible. To this end particular stress has been placed on the anatomical, histological and chemical alterations of the cell as the unit of processes of disease.

The first part of the book treats of pathogenic micro-organisms, the diseases they cause and the principles of immunity. Physical and chemical agents producing disease are next taken up and there is a separate section on disposition and heredity in which these topics are fully discussed.

The second part of the book deals with pathologic changes. The individual cells show such changes as atrophy and regeneration. Changes in the local relations of cells cause inflammation and tumors, while changes in the wider inter-relations of cells are illustrated by such generalized phenomena as oedema, shock and fever. The section concludes with a description of the pathologic changes in general somatic death.

Principles have been emphasized throughout. The style is concise and clear and the work will be of value both to university students and practitioners.

The second volume on special pathology will be awaited with considerable interest.

H. B. MAITLAND.



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## The Role of the Microscope in the Diagnosis of Syphilitic Infection

R. W. NAYLOR, M.B.

Assistant in Special Treatment Clinic, Toronto General Hospital.

THE object of this paper is to outline the necessary information and technique required in making the diagnosis of syphilitic infection by means of the microscope—also to emphasize the importance of this method of diagnosis and the difficulties attached thereto.

It is universally recognized that the *Spirochæta Pallida* demonstrated by Schaudinn in 1905 is the causative organism in the production of syphilitic infection. Noguchi later cultured the organisms and on inoculating the testes of monkeys and rabbits produced lesions and symptoms identical with the original lesions and symptoms. The organism has finally been classified as related to bacterial forms of life and not to Protozoa as was originally thought. The first part of the name (*Spirochaeta*) designates its corkscrew-like shape and the second part (*Pallida*) designates the fact of its being very difficult to stain with ordinary dyes in order to make it visible under the microscope.

We have all been taught that there are four forms or types of genital diseases, namely—syphilis, gonorrhœa, chancroid, and gangrenous balanitis, but for all practical purposes two only should be considered—syphilis and gonorrhœa. This is true because in every genital lesion the *Spirochaeta Pallida* must be excluded if possible, as the lesions of syphilis so often simulate or are associated with the other named lesions, even also with Gonococcal Infection.

The organism enters the skin or mucous membrane through

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Read before Section of Medicine, Academy of Medicine, Toronto, October 11th, 1921..

a minute and often microscopical abrasion and its initial reaction at point of entry is comparatively slight unless associated with secondary infection as well. The early appearance of a developing chancre may therefore be very misleading, in that a few days later a large ulcer may develop, due to the proliferation of *spirochaeta pallida* and their more or less secondary associates, with a more or less marked tissue reaction about the site, tending to localize the infection. On the other hand from time of entry of organism into host until reaction takes place and sore develops, a period of several days to several weeks may elapse, during which time the organisms are incubating, and either the tissue is slow to react to the activities of the organisms or the organisms are of a less virulent strain.

By far the greater majority of primary genital lesions seen are in males because the lesion is so often small and comparatively painless and is not noticed by the female—or the sore may be located in vagina or on external os uteri—or even masked by gonorrhœa in both species. Urethral chancres in males and vaginal or external os uteri chancres in females are I believe comparatively common and quite often masked by gonococcal infection. We have demonstrated their presence at the Toronto General Hospital Clinic. It is also of course very common to find male urethritis of gonococcal type associated with penile or foreskin lesion due to *Spirochaeta Pallida*.

Re the extragenital primary lesions—which probably make up 10 to 15 per cent. of the total number—they are comparatively evenly distributed between males and females. Probably 85 per cent. of these are found on lips, tongue, mouth and nose, while the fingers and breasts make up the remaining 15 per cent. These latter 15 per cent. are found particularly among physicians, surgeons, dentists, midwives and wet nurses, the result of contact while performing their usual occupations. These lesions may simulate many other known forms of disease.

It is therefore impossible (no matter how acute the observer) to distinguish in all cases between a syphilitic and a non-syphilitic genital or extragenital lesion without the aid of the microscope—and failing with this at times even after repeated examinations, one must make repeated blood Wassermann tests while closely following the case for further clinical evidence of the disease. Even tissue sections may be examined—the technique of which will probably be improved and simplified in the near future.

It is extremely important therefore that all suspicious-looking lesions, whether genital or otherwise, should be examined at once



for *Spirochaeta Pallida*, as in this way the earliest possible positive diagnosis of syphilitic infection can be made, and treatment, and early cure effected. The longer a case of syphilis goes untreated the harder it is likely to effect a cure and it is only in early diagnosed and early treated cases that we can hope to get the best results from treatment. It is considered possible to effect a cure without blood Wassermann becoming positive, if case is diagnosed four to ten days from onset of sore and intensive treatment effected. We have had such cases at our clinic which proves the value of the earliest possible diagnosis.

Stokes says that hours count in the modern treatment of Primary Syphilis and that anyone neglecting to investigate a suspected sore on any part of the body and waiting for a possible positive blood Wassermann test, is criminally negligent.

One positive *Spirochaeta Pallida* examination is significant of syphilitic infection if conducted under expert supervision, as it is only after some considerable experience that one becomes very proficient in recognizing this organism as seen under the microscope. This is due to the variety of spirals and spirochaetes which all show more or less similar morphological characteristics—in fact we may often get three or four types of spirochaetes from the same sore and even in the same smear.

One negative result in a suspected lesion does not signify much and tests should be repeated at a few day intervals as also should blood Wassermann tests be taken and retaken in negative cases—while always being on the alert for any further clinical manifestations.

The examination for *Spirochaeta Pallida* is extremely important in the secretions of primary lesions and in lymph glands draining the local site—as also in the superficial lesions of secondary syphilis—that is in the earliest secondary manifestations at which time the blood Wassermann is often still negative or only weakly positive. It is of no practical importance in blood examinations as the organisms, if present, are so scattered that the chance of getting them in smears is extremely slight. Nor is it of much practical value in tertiary superficial lesions as it must be made by examination of tissue sections. However, in suspected tertiary cases with superficial or glandular lesions and with negative blood and spinal fluid Wassermanns, the tissue examination should be made.

There are many difficulties met with in attempting to find *Spirochaeta Pallida* and hence the necessity for repeated attempts.

The greatest difficulty met with at the Toronto General Hospital Clinic is that the great majority of primary lesions have had some form or forms of local treatment, such as ointments, powders, washes, and even cautery. The organism is so susceptible to resolution under contact with even mild antiseptics such as soap and water, that we seldom find them while active local treatment is being carried on. We make the examination and if negative we apply normal saline dressings for a few days and re-examine repeatedly if necessary. But many positive locally treated lesions are never demonstrated as such until blood Wassermann becomes positive or secondary symptoms arise. In these cases we try to aspirate the deeper layers of the lesion in order to more likely find the organisms, and even in some cases, where the lesion is apparently healed by caustic, cautery or otherwise, we curette the site and examine for spirochaetes, as a sore may be healed up very quickly at times by such means and yet general syphilis develop.

Then we also get cases who have had one or two treatments of arsenic or mercury internally before any diagnosis has been made—except on clinical evidence. In these cases we seldom get the spirochaetes until several days have elapsed at least and indeed often not at all. In our clinic we try to be definitely positive in our diagnosis before we commence active treatment and thus brand our patient as a syphilitic. This, however, might not work out satisfactorily in all general practice where facilities for investigation are not so readily obtainable as in a large clinic or in city practice, but we hope that in the near future these facilities will be available under proper supervision in every community.

Then again, the sore is often comparatively old when we first see it and the spirochaetes may have left the local site. In these cases it is always wise to examine the lymph glands draining the area involved, as these are the last line of defence during the so-called Primary Stage of Syphilis—that is before blood Wassermann is positive or secondary symptoms arise. Often even in the beginning of second week of lesion the organisms may have left the local site while at other times they can be readily demonstrated even after secondary rash is well in evidence and blood Wassermann positive.

#### DESCRIPTION OF THE ORGANISM SPIROCHAETA PALLIDA.

Fortunately it is a very delicate organism and very susceptible to external influences outside its host—hence there are compara-



tively few transmissions of infection to the possible number there might be, were it more viable. It readily resolves outside its animal host unless kept under ideal conditions. Engman however states that post mortem tissue has been proven to be infectious in some cases as long as twenty-four hours.

It is a small delicate spiral of three to twenty or even more spirals and is of a total length of about the diameter of one and a half to two red blood cells. The spirals are very regular and taper at each end like a corkscrew. It takes the ordinary dye stains very poorly and is best demonstrated in a beam of reflected light against a dark background.

It has three distinct movements—

(1) Longitudinal—along its axis with slow corkscrew-like progress.

(2) Backward and forward—covering only a very small field area.

(3) Lateral—due to the lashing about of its ends in an angular or elbow-like movement.

This last may be more or less marked in some cases than in others and is best seen in the first few minutes after serum is obtained from lesion. This last movement I believe to be more significant of *Spirochaeta Pallida* than any one other characteristic. Its spiral shape is definitely maintained always in unstained specimens, but not always so in stained smears, etc. It can be cultured and demonstrated experimentally in testes of monkeys and rabbits.

More recent reports by Noguchi more or less confirmed by Reasoner, state that he suggests strains of *Spirochaeta Pallida* such as—

(a) Thick or Coarse Type—

Showing marked virulence experimentally such as marked in duration and necrosis with violent clinical symptoms.

(b) Thin or Delicate Type—

Producing mild local and clinical symptoms.

(c) Average Type—

Producing moderate local and clinical symptoms.

This however can only be substantiated or not, as the case may be, by long, careful observation of their morphological characteristics and experimental manifestations. It is quite reasonable to suppose however that strains do exist in this as they do in many other forms of bacteria.

MacDonagh has even described certain bodies peculiar to syphilitic tissue and blood which he believes to be involution forms

of the organism. This, however, is unlikely, due to the fact that *Spirochaeta Pallida* obtained from tertiary lesions, spinal fluid of tabetics and brain tissue of paretics all show the same morphological characteristics and experimental manifestations as those obtained from primary lesions.

#### DIFFERENTIATION OF SPIROCHAETES.

(1) *Spirochaeta Pallida*—

Coils are very fine, regular, slightly rounded, and not angular. It averages about seven or eight coils to the diameter of a red blood cell with clear space between each coil. It has the three movements as previously stated and is of a dead white color in dark field—not dazzling white.

(2) *Spirochaeta Dentium* in two types—*Macradentium* (large) and *Microdentium* (small)—

Very similar to *Pallida* and the smaller type is particularly so. Its coils however are more tightly rolled that is more angular and not so open as the *Pallida*. It averages eight to ten coils to the diameter of a red blood cell and its movements are slightly stiffer with absence of the elbow-like movement to a great extent at least. These organisms are found in the mouth which makes the examination of sores on lips, tongue, etc., exceedingly difficult to diagnose. So also may a genital lesion become contaminated with these organisms, which necessitates a very careful examination of all smears before a definite positive diagnosis of *Pallida* is made.

(3) More Refrigent Types—

Found in genital sores of particularly dirty exudative character.

- (a) One very similar to *Pallida* with regular and somewhat thicker coils and structure, averaging five coils to the diameter of a red blood cell. It is more active and covers more space in field than the *Pallida* and is of a more dazzling white color against a dark background. It has not the characteristic movements of *Pallida* and its edges and ends are more blunt.
- (b) A short one of three or four coils, quite coarse, extremely active and easily diagnosed from *Pallida*. The curves in these two types are often irregular and often more or less lost while organism is at rest.



## TECHNIQUE OF GETTING SERUM.

All these above mentioned facts lead us to carefully clean and dry suspected lesions to get clear if possible of superficial contaminating spirochaetes and spirillae and obtain the true causative organisms in the deeper layers of the lesion.

This is best done with normal saline and then wiped dry with clean gauze which may itself cause sufficient exudation of serum from the sore, or it may be necessary to squeeze the edges or even to curette the base of the lesion to get sufficient serum. Always avoid blood or pus cells in the serum used as far as is possible, as these distort your field of vision and give rise to lighting irregularities in Dark Field Examinations. Excess of blood may be wiped away until clearer serum exudes and which may be transferred to slide or coverslips best by use of a small capillary pipette.

In mouth lesions the same principles apply with particular care to avoid contamination as far as possible because of the marked similarity of the Dentium organism to Pallida.

In skin papules it is necessary always to scrape off the superficial layers of epithelium to get the organisms beneath.

In skin macules the application of a small blister, removal of blister fluid, and expression of serum from raw surface beneath gives best results.

In lymph glands we first fix the gland with fingers so that it bulges the skin, and then inject into the gland, with the aid of small needle and syringe, about five to seven drops of sterile normal salt solution. Then we massage the gland slightly, with needle still inserted, and aspirate a few drops of serum with the syringe and examine.

## METHODS FOR DEMONSTRATION OF SPIROCHAETES.

## (1) Dark Ground Illumination—

Always preferable to other methods in that the organism is examined in a living state.

## (2) Stained Films—

## (3) India Ink and Congo Red Smears—

## (4) Films and Tissue Sections Stained by Silver Nitrate Methods—

## The Dark Ground Illumination Method.

By this means the organism is seen in a beam of reflected light against a dark background. The principle of the method is to render a microscopic object self-luminous so that no preliminary fix-

ing or staining is necessary in order to see it. In order to obtain self-luminosity the organic structure must have a refractive index definitely different to that of the medium in which it is being examined, and it must be illuminated more or less intensely but in such a manner that only the light reflected by the organism itself can reach the observer's eye. This is effected by use of a dark background.

Any good microscope with oil immersion lens may be used, in conjunction with a properly adjusted substage dark field illuminator, which takes the place of the condenser used for ordinary microscopical examinations. This apparatus may be procured from any reliable microscope firm to fit a microscope made by the same manufacturer. Apparatus can be obtained for an above-stage illuminator, but I believe the substage type to be more easily centred to your objective, and more easily controlled.

The objective usually used is a one-twelfth inch Achromatic with oil immersion.

Ordinary oculars will suffice and of a medium power averaging X6 to X12, but some observers use the compensatory type, particularly when an Apochromatic objective is used.

The numerical aperture of the objective must in practically all cases be reduced and is best done so by use of a hard rubber funnel stop usually supplied with dark field apparatus. This is simply a short tube with constricted end which drops into the back of the objective and must fit properly in order to be effective.

#### ILLUMINANTS USED ARE OF DIFFERENT TYPES.

Probably the best point source of light is obtained in the Pointolite Lamp, supplied by the Ediswan Co., but unfortunately this can only be used on a continuous current circuit.

The electric arc is also used and serves very well except that the carbons require more or less continuous attention and one often gets a flickering, dazzling light and always much heat. For intense and clear illumination however this is probably the best illuminant.

The electric lamps of filament type are not usually considered so satisfactory, but the Spencer Lens Co. supply an apparatus with lens and a 400-watt Mazda stereopticon bulb which for all practical purposes works out quite satisfactorily and is essentially simple in its construction and manipulation.

Many other types and modifications might be mentioned.

Cover glasses and slides must be clean, free of bubbles and scratches, thin, and of even thickness to obtain the best results.



Absolute cleanliness of all apparatus is essential, also the centering of substage illuminator to your objective by use of lower-powered ocular.

The serum obtained from lesion in capillary pipette is transferred to coverglass and this is then dropped carefully on slide, avoiding air bubbles. It is then pressed out to make a thin even film. A drop of good immersion oil is used on lowered substage illuminator, one drop on body of slide beneath the film, and one drop on coverslip above the film. The substage is then raised to fuse the two drops of oil, avoiding air bubbles and objective is slowly lowered into oil on surface of coverslip. Then examine for *Spirochaeta Pallida*.

(1) Stained Films—

Probably the second best method is that when positive results are obtained they cannot be questioned, but unfortunately the *Spirochaeta Pallida* has comparatively small affinity for most staining reagents so that one may get more or less persistently negative results or else comparatively few organisms taking the stain—thus giving one a very poor conception of their frequency as shown by Dark Field Illumination Method. Again, too, there is absence of motility and often distortion of organisms due to drying and fixing. In these the films, immediately on becoming dry in air, are fixed by use of absolute alcohol, methyl alcohol or osmic acid before the stain is applied. The stains show up the *Spirochaeta Pallida* as rose pink in color and other spirochaetes as blue in color.

Three Methods particularly used —

(a) Giemsa's Long—

The oldest and probably the best method. The film is stained for twelve hours in a one in ten to fifteen dilution of stain.

(b) Giemsa's Rapid—

By using the same stain dilution but heating it freshly to steam heat several times, washing in tap water after each heating and applying fresh stain for each subsequent heating.

(c) Leishman's and many others all of which are really modifications of the former and which may be reviewed in standard text books on the subject.

(2) India Ink and Congo Red Smears—

This is by far the simplest method of examination for spirochaetes, but to differentiate the *Pallida* from the others is ex-

tremely difficult and is only of value at all in the hands of an experienced observer. This is true because the organism varies more or less as does the thickness of film made—that is fine in a thick film and thicker in a thin film. Again there is no motility and there is the liability to distortion of the organisms. Its best value therefore lies in its simplicity.

A drop of serum is well mixed with a drop of India Ink—very fine suspension is preferable—on a glass slide, smeared out as in a blood smear, allowed to dry in air and examined with oil immersion lens. This is all the technique necessary.

A 2 per cent. Congo Red Solution may replace the India Ink Solution but it is necessary to flood the film with acid alcohol as soon as it has dried, to produce a bluish purple background to show the organisms up.

### (3) Silver Nitrate Methods of Staining Films and Tissue Sections—

Fontana's method for staining films and Noguchi's Modification of Levaditi's Method for tissue sections are probably the best. The technique of these methods may also be reviewed in standard works covering bacteriological and pathological technique.

It is therefore quite apparent that in order to make a diagnosis of syphilis by means of the microscope it is necessary to be well-informed on points mentioned in this paper and to acquire careful technique and powers of observation that one may be sure of such a diagnosis. Nevertheless this means of diagnosis is absolutely essential above all others in primary lesions if earliest possible diagnosis, treatment, and cure is to be expected.

In closing let me emphasize a few points—

(1) No observer can always diagnose a specific from a non-specific lesion by clinical observation alone.

(2) The microscope affords the best means by which we can make the earliest accurate diagnosis of syphilitic infection.

(3) The earlier the diagnosis is made the more hope for a speedy and permanent cure.

(4) The best method of demonstrating *Spirochaeta Pallida* is by Dark Field Illumination, with stained films probably ranking second in importance.

(5) The diagnosis is only of full value when given by an observer who has had considerable experience in this work.

(6) A single negative examination has no special significance, several examinations should be made if necessary.



(7) Facilities of Dark Field Illumination under proper supervision should be available in every community.

(8) Our medical students, general practitioners, and the people at large should be studiously taught the importance of investigating, or of having investigated, any suspicious genital or extra-genital sore for the presence of *Spirochaeta Pallida*, if we ever hope to in any way control the transmission of syphilitic infection. Also they should be taught that the presence of gonococcal infection should stimulate them to investigate for possible syphilitic infection as well.

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# Community Nursing at Sulphide

JESSIE FARQUHARSON.

**S**ULPHIDE is a little village of 300 inhabitants about 70 miles east of Peterboro. For some fifteen years The Nichols Chemical Co. have been operating a plant here, manufacturing acid and mining iron pyrites from which Sulphur is extracted.

The Company is very progressive and very anxious to promote the welfare of its employees. They pay particular attention to the health of the people—their recreation and education. The houses are equipped with bathrooms and electricity. There is a recreation hall with billiards, bowling alley and movies, and the School is supposed to be the best equipped rural school in Ontario.

For a time there was a company doctor who lived in Tweed—six miles distant—but in January 1920 a nurse was employed instead and this has been found more satisfactory.

Some years ago an Employees' Association was formed for the purpose of managing the affairs of the employees. Each employee pays a monthly fee and for each One Hundred Dollars raised by the Association, the Company puts in One Hundred Dollars. These funds keep up the recreation hall, the sick benefit fund and the nurse's salary. A small hospital is connected with the Clubhouse, where the nurse resides. The Company provides the drugs and supplies used by the nurse for dressings in the hospital and for use on her visits.

As far as industrial nursing goes, very little is done. Such stress is placed upon prevention that few accidents occur. Men come to the hospital to have every little cut dressed and there have been no infected wounds since I came. Two men have lost a little time owing to accidents since April. The mine is well ventilated and the miners seem healthy. One case of tuberculosis has developed but the man had been working here a very short time and had a history of previous hemorrhages.

When someone becomes ill, the nurse is usually sent for at once. When I do not feel that I should assume the responsibility of the illness, I advise the family to send for the Doctor. As a rule I find people unwilling to go to that expense. They think a nurse should be able to examine heart and lungs and diagnose all kinds of cases.



Many would have their dentistry done too. One man with a few old roots in his mouth is reported to have said: "She ain't no real nurse; she won't pull no teeth." Of course it is the more ignorant class who expect so much.

During a patient's illness I call every day if necessary, note the symptoms and give any nursing treatment that cannot be given by the people themselves. The health habits of the patient are always inquired into and instruction given regarding his diet and hygiene. In adults it is nearly always necessary to give advice regarding dental attention and the correction of constipation. The doctor's visits are necessarily few and much is left to the nurse. Nearly all the families have young children and there are no unmarried women in the village so the problem of household help is hard to solve.

The nurse does prenatal work, school work and infant welfare work as time allows. Prenatal cases are visited and fortnightly specimens are asked for but not always sent to the nurse. Two cases of albuminuria were found this summer. Nearly all the mothers nurse their babies. Of course there is a tendency to feed them too often, though they know better.

We were fortunate to have Dr. Bell and Miss Osborne, of the Provincial Department of Health, at a Child Welfare Clinic, Aug. 25th and 26th. Ninety children were examined, sixty of whom came from Sulphide. The clinic was a great success and has stimulated a greater interest in Child Hygiene in both parents and children.

Dr. Bell noted that there were no cases of rickets or scurvy, no pediculosis and very little skin trouble, just two cases of impetigo. There were fifteen cases of malnutrition, eleven being due to tonsils and adenoids, one to bad teeth and three to improper feeding. The children's teeth were well brushed and they looked neat and clean.

As a rule the homes are well kept, well ventilated, and the food well prepared. Of the more ignorant class—many of whom neither read nor write—less can be said. I found a case of scabies at school the other day and asked the child when he had had a bath. The reply was "Not since the clinic, Miss."

There are about ninety children in Sulphide. During the last six months there have been seven births, no deaths and no serious cases of illness among children. In children up to five years of age, six cases of diarrhoea have occurred, most of which recovered in 24 hours.

The leading people in Sulphide are much interested in the work. The Superintendent, Mr. DeBlois, could not do more to help the work along, and his sympathy and co-operation are of great assistance. The teachers, the Chairman of the School Board and the President of the Employees' Association all deserve special mention.

The teachers are very enthusiastic public health workers. In the domestic science department, the girls are learning to prepare the diets for children as outlined by the Bureau of Child Welfare of the Province. In their Art classes they are to make posters, printing on them health rules. We are hunting up pictures suitable for these posters and the children are quite enthusiastic. We have Mother Goose Health Rhymes which the children want to sing. The children are much interested in their weights and I only wish I had more time to spend with them. I give them weekly talks when time permits and they remember easily what is said. Practically every hand goes up when I ask a question in review.

We are to have a "Tonsil Day" to do the work recommended at the clinic. When making the follow up calls after the clinic I was much pleased with the attitude of many of the people. In some cases we started at the baby and went up to the grandfather. Recently I called at a home where several of the children were underweight. The mother was doing her best to follow Dr. Bell's advice. When I asked little Pauline how she was getting on she said, "I have had one chocolate and one peppermint since the clinic. We eat porridge and we haven't been to the movies."

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# Brief History on Leprosy in Inverness County, with Note on Modern Treatment

DR. P. S. CAMPBELL, M.H.O., *Port Hood, N.S.*

**L**AST winter our vigilant and efficient Health Officer in Chief, Dr. Hattie, prompted by information he received of the existence of leprosy in Inverness Co., particularly in the Lake Ainslie district, instructed me to make an investigation to determine, if possible, what grounds there were for the information—hence it was that I became interested in the subject—Leprosy.

Later on when Dr. Hattie asked me to give the result of my findings together with some general remarks on leprosy, to the assembled health officers of the province, I consented most reluctantly. If I had not looked upon his request as in reality a command from a Superior Officer I should have refused absolutely, for many of you already know and all of you will soon know that I can lay no claim to being an authority on this subject.

One thing I promise that is to be brief, so that you have the assurance of relief in sight.

In looking up this matter of leprosy in Inverness, I could not find a medical man, in the Municipality, who ever saw a case in his practice. Several of them said, there was a common belief that it existed in two or three sections some years ago. All medical men who practiced in those sections twenty to thirty years ago have gone where the good doctors go.

The information, then, with regard to leprosy in this County, is chiefly in the form of a tradition passed down through a few generations—and here it is.

Almost a century ago, an Irishman named A.A.A., who had been in the British army or navy or both—immigrated to America and settled in Z.Z.Z., Inverness Co. He was married to an English woman and hers was the first case of leprosy in the county—she died of the disease at the place above mentioned. Out of a fairly large family of girls and boys only two of the latter contracted it and died at home. The girls never showed outward signs of leprosy but the husband of one of them, named B.B.B., who lived at

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Read at the Seventh Annual meeting of the Association of Medical Health Officers and First Conference of Public Health Nurses of Nova Scotia.

the rear of Y.Y.Y., contracted the disease and died there. The B.B.B. family then moved to the United States and nothing further is known of them. Another sister (that is to say a daughter of A.A.A.) married a C.C.C. at X.X.X., and although she never showed symptoms of this disease her husband died of it as did three of their children.

Another man at X.X.X., D.D.D., not a relative of the other parties mentioned above, also died of leprosy. The theory held by the people was that this man (D.D.D.) contracted it through exposure in "laying out" one of A.A.A.'s sons who had died of leprosy. While D.D.D. was lying ill, a niece of his, a Miss E.E.E., also of X.X.X., attended him—she was later stricken with leprosy and died at home. It is now about thirty years since E.E.E. died—this was the last known case in the locality.

A common belief, with some of the older people, is that leprosy obtained also in the East Lake Ainslie district between the years 1860, 1870, 1880 and 1890.

As we shall see, presently, there is available evidence to prove the correctness of the belief—the story goes that two maiden sisters named F.F.F. and several members of a G.G.G. family succumbed to it.

In response to an inquiry a letter dated April 1921 received from Dr. J. A. Longis, Med. Supt. of the Lazaretto, Tracadie, N.B., contains this information: "On July 15th, 1889, one H.H.H., from Scotchville (E. Lake Ainslie), Inverness Co., was admitted to the Lazaretto as an advanced case of tubercular leprosy. The patient was aged 44 years. He died September 1st, 1889."

I have not been able to trace this East Lake Ainslie leprosy back to A.A.A., nevertheless I believe it to be the same strain since the districts adjoin.

From the foregoing one thing is certain, viz.: that there has been leprosy in Inverness County not in the very distant past either—then follows the probability, remote if you will, nevertheless a definite probability of it still existing in parts of the municipality—so that a sharp "look out" by medical health officers in particular and by physicians in general, in Inverness and adjoining counties, is in order.

Fearing that leprosy may still be lurking in some localities waiting for a favourable opportunity to assert itself, it might not be wholly unprofitable to say something about the disease in general, with brief notes on its modern treatment.

*Leprosy* is a chronic disease, caused by the bacillus *Lepra* and



characterized by lesions of the skin, nerves, and viscera ending in anesthesia ulceration and a variety of tropic changes. It appears to have existed in Egypt some thousands of years before Christ—both in India, and in China, it was also known several centuries before the Christian era. It was probably introduced into Greece and most likely from Egypt about 300 B.C. About the time of the Christian era it was found in Italy, during the next few centuries it increased rapidly there and spread thence over the greater part of Europe. To-day the disease prevails in China, India, Iceland, Norway, Sweden, Russia, Spain, Portugal, South Africa, Australia, West India Islands, Hawaiian Islands, California, Louisiana, Minnesota, New Brunswick, Manitoba and British Columbia.

*Etiology.* It is now generally recognized that the bacillus *Lepra*, discovered by Hansen of Bergen, in 1871-74, is the cause of the disease. The best authorities believe that leprosy is propagated by contagion only—as to the particular way in which, or medium by which the contagion is applied, all investigators are not of one mind; but that it passes directly or indirectly from the infected leper, must agree as being practically proved.

Before the bacillus was discovered leprosy was almost universally believed (as it still is by some) to be an hereditary disease. Now the last authorities assert that certain qualities, predisposing to leprosy may be inherited but it is impossible to believe that the bacillus itself and therefore the disease it causes can be hereditary in the scientific sense of the word.

The bacillus *lepra* very closely resembles the tubercular bacillus both in appearance under the microscope and in staining qualities, it however, stains more readily in the cold. It is exceedingly difficult to grow it on the usual culture media and it has very seldom if ever been successfully inoculated into man or the lower animals.

*Forms.* In considering leprosy it is customary to speak of three forms—tubercular or nodular—nerve or maculo anaesthetic and mixed leprosy.

*Nodular form.* A short macular stage precedes the appearance of the characteristic lesion or after a prodromal period the disease begins with an attack of fever and rapid development of the nodules, which are the essential element in this form. Favourite sites for the nodules are the face, thighs, groins, back of hands and wrists. These nodules after persisting for a longer or shorter period usually either soften in the centre and are absorbed or after softening they ulcerate and discharge a yellowish pus—finally the ulcer may heal, leaving a depresser scar.

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If the patient live sufficiently long the nerve trunks may be attacked giving neuralgia pains, pangs, etc. Fingers and toes may ulcerate and drop off or phalanges be absorbed. The average duration of this form is eight to ten years.

*Nerve or anaesthetic form.* In this type much more frequently than in the nodules, there is a long macular stage during which large areas of skin are covered by erythematous or pigmented patches—next follows neuralgia pains and anaesthesia locally. This anaesthesia begins most commonly in the feet, arms and face. At first it is superficial gradually becoming deep and absolute, so that the part may be touched with a hot iron and the patient be wholly unconscious of pain. On the whole the advance of this form is much slower—average duration being about eighteen years. Some have lived twenty to forty years.

*Mixed leprosy*—as the name indicates, is a combination of the nerve and nodular varieties.

*Diagnosis.* The presence of anaesthesia in a skin lesion is very suggestive, for in no other skin disease is definite anaesthesia a symptom. Again leprosy spots seldom perspire. This may be tested with a hypodermic of pilocarpin. The absolute diagnosis rests in the finding of the bacillus which may often be readily secured by excising a leproma. The bacillus is also found in the macular eruptions and in all primary deposits, nerve lesions, liver, spleen and lymphatics. It is not usually found in bone or cartilage nor in the brain.

The ordinary conception of this disease, in which the leper is symbolical of all that is loathsome, is apt to be misleading. In the earlier stages it is not, by any means, a striking disease, for often the only evidence of its existence may be a few small blotches or areas of pale or pigmented skin and perhaps disregarded by the patient himself. It is during the later stages that we see the disfiguring and nasty lesions on which the popular conception is founded.

*Treatment.* Of prime importance in the treatment are attention to personal cleanliness, good food, fresh air, no overstrain, fatigue or exposure. Segregation should be insisted upon. Most lepers, when placed in hygienic surroundings, improve for a time at least. Of drugs, many indeed, have been tried—the following have been more or less largely employed. Sodium, Salicylate, Turjun oil, Ichthyol, Pct. Iodide, Salvarsan, Methylene Blue, Aristol and Chaulmoogra oil. Of these the last named alone has stood the test of time.



To-day a great deal of work is being done on leprosy at the United States Leprosy Investigation Station—Hawaii Islands. The Kaliki hospital with 150 beds situated at Kalihi, a few miles from Honolulu, is well equipped for doing this work. The Superintendent of this hospital, Dr. J. T. McDonald, has placed himself on record as saying that "the nearest approach to a specific for leprosy lies in Chaulmoogra oil (Tynocardium oil), with this many other workers agree, in fact, some say definitely that it is a specific. The oil is obtained chiefly from India, expressed cold from the nuts of native trees (Taraktogenous Kurzii). It was formerly used in its crude state, often with beneficial results. Dr. A. L. Dean, president of Hawaii University and thorough chemist, separated the oil into four fatty acids and then on account of their insolubility converted these into thin Ethyl Esters—thus obtaining clear thin fluids quite absorbable from intramuscular injection. On experimentation it was found that all four contained the Curative Virtue. To-day then the old crude oil mixture has been almost entirely abandoned for the Ethyl Esters of the four fatty acids. The preparation as marketed is, I believe, called "Moogrol."

As a bactericidal agent, it is claimed to be one hundred times more active than Phenol, in the destruction of the lepra bacillus. Standard treatment then consists in weakly intramuscular injections under aseptic precautions, of from one to six c.c. of this Ester. The site chosen is the upper and outer quadrant of the gluteal region. In addition to this some physicians give by mouth, a capsule containing the fatty acids beginning with  $1/6$  gram per one hundred pounds body weight three times a day an hour after meals and gradually increasing to one gram per one hundred pounds body weight. It has been found that of the two forms of treatment the injection is much more important, in fact some investigators claim that patients on injections alone do as well as those on both—injections and capsules. Under this treatment between October 1st, 1918, and October 1st, 1920, there were discharged from the Kalihi hospital, as no longer a menace to public health, seventy-eight patients. None of those have, so far, shown any signs of recurrence. The average stay in hospital was fifteen months. In this group of seventy-eight there were forty-nine of the nodular type, twenty-four of the anaesthetic and five of the mixed.

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# Syphilis: Its Relation to Infant Mortality and Child Welfare, with a Discussion of Present Day Method for Its Control

BY E. A. MORGAN, M.B.

From the Wards and Out Patient Department of the Hospital for Sick Children.

Read before the Section of Child Hygiene of the Canadian Public Health Association, May, 1921.

ANY discussion or statistical survey pertaining to the relation of Syphilis to Infant Mortality would fall woefully short of complete thoroughness and would fail altogether to achieve the desired object, namely, the demonstration of the social and economic loss to the nation resulting from this disease, were it to include only the infant deaths due to syphilis. In order to reach a more accurate conception of the seriousness of the problem I have taken the liberty of using the term Infant Mortality in a broader application than is customary, and have made it include the prenatal loss of life. As a matter of fact it is the prenatal ravages of this disease which are the most disastrous. All of us, who have been interested in the problem of reconstruction following the war have realized the supreme importance of the conservation of the infant life, but how many of us have given more than a passing thought to the birth-rate problem? We all recognize the ultimate effect on the birth-rate of the loss of thousands of Canada's manhood in the war. Added to this there is the universal tendency amongst the married to shirk the expense and responsibilities of parenthood. The present high cost of living is mainly responsible for this state of affairs. To quote actual figures:—the birth-rate in Toronto dropped from 29.7 per 1,000 population in 1914 to 22.6 per 1,000 in 1919, and a similar decline occurred in the Provincial figures. The depletion of the country's young men in the war and the high cost of living are factors over which we have no control, but these are by no means the only factors operating in the production of a lowered birth-rate.

Another and a very important one is syphilis, and this one we are at present, capable of controlling, and, I hope in the future, will control. Just how important it is, is very difficult to put into figures, but an approximate estimate can be made.



In 1920 there were 13,300 births recorded in Toronto and 675 still-births. It will be observed that the still-births are approximately 5 per cent. of the live births—a proportion that is fairly constant in every country.

(1) Few figures are available which are of any help in arriving at an estimate of the number of miscarriages. They are probably twice as numerous as still-births, or 10 per cent. of the total live-births—a conservative estimate. The total, therefore, for miscarriages and still-births is 15 per cent. of the live-births. That this figure cannot be very far astray is shown by statistics given by Adair.

(2) Of 2,773 pregnancies 2,422 ended at term and 351 or 14.5 per cent. terminated prematurely. Schwartz (10) found that in 27,711 pregnancies the miscarriages were more than five times as frequent as still-births, but the two added together were only 10.56 per cent. of the living births. Accepting the figure 15 per cent. as an average one, there were thus 2,000 miscarriages and still-births in Toronto in 1920. According to Jeans (5) and others (3.4) at least 30 per cent. of these are the result of Syphilis, giving a figure of 670 as an index of the prenatal mortality for one year in Toronto alone due to this disease. The effect of syphilis in producing sterility need not be considered, since it is a doubtful one. This disease may be an important cause of childless marriages, but it is not a frequent cause of sterility.

*Post-Natal Mortality.*—In attempting to obtain statistics regarding the number of infant deaths due to syphilis one is at once confronted with difficulties. Firstly, the luetic infection may be, and probably is, only the remote cause of death and for that reason frequently does not appear on the death certificate at all. Secondly, there is a very evident and very pardonable hesitancy on the part of all physicians to enter syphilis as the cause of death on a certificate which is apt to be, as one English physician puts it, "Hawked about among relatives for the delectation of prudes." In Toronto during the past year there were filed only 19 certificates of death for infants under one year on which the diagnosis of syphilis appeared as either a remote or immediate cause of death. It must be obvious to anyone interested in the problem that this figure is absurdly inaccurate and incomplete. Seventeen cases of Congenital Syphilis died in the wards of the Hospital for Sick Children alone in that year. Out of curiosity I looked up the certified cause of death in these seventeen cases and discovered that in eight or nearly 50 per cent. there was no mention of syphilis. If a hospital in-

terne, who has at hand, every facility for making an accurate diagnosis and who, in signing the death certificate, is indifferent to the sensibilities of the relatives, fails to furnish an accurate record of death, is it any wonder that remissness is displayed by the general practitioner who is frequently unable to make a definite diagnosis, and who is very liable to suffer professionally if he is honest in his certification?

I have arrived at an approximate figure for the infant deaths due to syphilis by an estimate based on statistics of prevalence. Various estimates have been made of the prevalence of this disease among the infant population. Figures obtained from outpatient departments of hospitals on this continent, and admissions to the wards show a range of from 2 per cent to 6 per cent. (6) Jeans believes that 5 per cent. of the infant population is syphilitic (1). Of 725 successive admissions to the Medical Wards of the Hospital for Sick Children, Toronto, 29 or 4 per cent. were proven serologically and clinically to be syphilitic. Since the great majority of deaths due to lues occur in the first few months of life, whereas the majority of the hospital admissions are over that age, it is probable that considerably more than 4 per cent. of all births are syphilitic. This would mean 665 luetic children born each year in this city, and of these at least 25 per cent. or 166 would die in the first year of life. According to these figures, syphilis would supersede broncho-pneumonia as a cause of infant deaths in the first year and would take its place beside decomposition; and I am firmly convinced that more accurate death certification would show this to be the case.

A glance at the premature death-rate may help to convince the sceptical. There were 305 deaths due to prematurity in this city last year—the largest single factor in the infant mortality. Careful estimates based on serological and post-mortem examinations have shown that about 18 per cent. of prematures are syphilitic (2) Thus here alone we can account for 54 infant deaths due to syphilis or one-third of the previous estimate of 166.

TABLE I.

Showing Estimated Wastage due to Syphilis in Toronto for One Year.

|  |        |     |
|--|--------|-----|
| Registered Live-births .....                     | 13,300 |     |
| 5 per cent. of these Syphilitic (estimate) ..... | 665    |     |
| 25 per cent. Die in 1st year .....               |        | 166 |
| Registered Still-Births .....                    | 670    |     |
| 30 per cent. Syphilitic (estimate) .....         |        | 223 |
| Miscarriages (estimate) .....                    | 1,340  |     |
| 30 per cent. Syphilitic (estimate) .....         |        | 447 |
| Wastage due to Syphilis total .....              |        | 836 |



TABLE II.

Showing the Wastage in Known Syphilitic Families, compared with that in Families Showing no Obvious Signs of Syphilis. Figures Obtained from Various Sources.

|   | Per cent. of Total Pregnancies.    |            |                   |                      |               |
|---|------------------------------------|------------|-------------------|----------------------|---------------|
|   | Miscarriage<br>and<br>Still Births | Prematures | Living<br>Healthy | Living<br>Syphilitic | Died<br>Early |
| Syphilitic Families .....                                 | 30.3                               | 2.2        | 16.6              | 63.2                 | 30.2          |
| Families showing no<br>obvious signs of<br>Syphilis ..... | 9.7                                | 0.9        | 76.0              | .....                | 15.0          |

*Congenital Syphilis and Child Welfare.*—If a syphilitic infant survives the first twelve months of life there is a much greater chance of his reaching maturity. Approximately 90 per cent. of the deaths due to congenital syphilis occur in the first year. In the United States in 1915 there were 2,249 deaths under five years recorded as due to syphilis and of these 2,022 or 90 per cent. occurred in the first year. (7) As a rule the second, third and fourth years are uneventful even in an untreated case. After this time various symptoms and signs—the so-called late or tertiary manifestations of hereditary lues—make their appearance and it is these manifestations that have an important bearing on the Child Welfare problem.

It will be seen that the special senses, particularly sight and hearing, the osseous system and the brain are the most frequently attacked. Statistics gathered from various sources show that congenital syphilis is responsible for 31.2 per cent. to 34 per cent. of blindness in children, and for about 17.25 per cent. of acquired deafness. (8) It is also an important and frequently unrecognized cause of mental deficiency in children. The frequency of physical deformities due to syphilis may be demonstrated also by a study of a series of cases. During the past 22 months the Hospital for Sick Children has treated in the wards and Out-Patients' Department 127 children suffering from Congenital Syphilis and one from the acquired form. Sixty-six of these children were over four years of age and of these 35 or 53 per cent. have at present, or have had interstitial keratitis. In 11, or 16.6 per cent. the sight is permanently impaired. In 4 or 6 per cent. deafness of varying degree is present. Thirteen or 20 per cent. are mentally deficient and four of these are partially paralyzed. Twenty-five of the 127 cases have been lost sight of, but of the remaining 102, 26 or 25.5 per cent. died. There are thus 76 cases alive and under observation. Of these 7 will of necessity become permanent charges on the com-

munity as the result of incurable physical or mental defects. Besides the more serious tertiary manifestations already mentioned there are numerous deformities of the bones and joints, such as sabre-shin and arthritis, deformities of the teeth, nose, pharynx and larynx and systemic diseases such as anaemia and malnutrition. In fact, of the 66 children over 4 years of age 47 or 70 per cent. would be marked as physically or mentally sub-standard. When one realizes that at least 5 per cent. of the children of the country are syphilitic the magnitude of the consequences of the disease will be more thoroughly appreciated.

Apart from the lowering of the physical and mental standard of the child we must consider also the grave economic losses to the country which is entailed by the loss of earning capacity, and by the sums expended on the treatment, care and education of the more seriously affected.

*Methods of Control.*—For convenience sake I have dealt with the solution of the problem under three headings, the control of syphilis in its relation to (a) The birth rate, (b) Infant mortality, (c) Child Welfare.

(a) Birth rate.—The two most important factors for consideration here are firstly, the education of infected adults and secondly, the treatment of pregnant syphilitic women. Consideration of the first factor is intimately bound up with the aims and activities of the Canadian National Council for Combating Venereal Diseases and the question is too large a one to permit of more than a brief discussion in this paper. By proper educational propaganda it is hoped to accomplish: (1) The prevention of marriage of infected adults until they are pronounced cured by a physician. (2) A realization among syphilitics of the necessity of systematic treatment if they are anxious to have healthy children. Syphilis is responsible for a fairly large per cent of childless marriages and in a great many of these cases the couple, though anxious to have children, are absolutely ignorant of the true cause of the repeated miscarriages and still-births. Many of them would willingly undergo thorough courses of treatment if they were promised thereby even a reasonable chance of parenthood.

The treatment of the pregnant syphilitic woman is a problem for the prenatal clinics and is one that has a great future. In large centres, such as Toronto, the performance of routine Wassermann reactions on every pregnant woman applying for examination is possible. In the Wassermann positive cases the probability of securing a healthy infant by adequate treatment of the mother



during the period of gestation has been frequently and conclusively demonstrated.

(b) Infant Mortality.—All that has been touched upon in the previous paragraph applies here with equal force. Added factors must, however, be considered. There is the treatment of the syphilitic infant as soon as symptoms of the disease appear. With the first evidence of snuffles the child should receive intravenous arsenical medication, alternated or combined with mercurial inunctions. The earlier treatment is instituted the better is the prognosis. Since specific treatment is beyond the financial means of many individuals, free-treatment clinics are now in operation in many towns in the province, such clinics being subsidized by the Federal and Provincial Governments. To my mind the maintenance of the child's general nutrition is of even more importance than anti-syphilitic medication. It is therefore essential that the child be kept nursing, since only by this means can we avoid the frequent gastro-intestinal and nutritional disturbances which are common to bottle-fed syphilitic infants. Veeder (9) has shown that the mortality for artificially fed luetic infants is four times as great as for breast-fed ones.

(c) Child Welfare.—Under this heading I shall deal mainly with those children who have survived the first year. Recognition of the tertiary luetic manifestations by Public Health nurses, and by physicians is of paramount importance if these children are to be referred for treatment. The first step toward this end must be the proper education of nurses during their training and more thorough teaching of the subject in medical schools. To give you some idea of the results of treatment I have chosen all cases from the special treatment clinic of the Hospital for Sick Children, who have been under treatment for a period of more than five months. Such a series, however, gives one no true conception of the mortality of congenital syphilis since most of the young infants in the secondary stage are admitted directly to the wards of the hospital. As pointed out in the previous paragraph, the mortality for 127 cases was 25.5 per cent. Though this figure may seem unduly large, it compares very favorably with figures reported by many other workers in this field. There is every reason to believe that co-incident with more widespread recognition of the disease and its seriousness, by the laity and the profession this figure will be materially reduced. Also I will not attempt to cover the results of treatment as evidenced by the improvement in local lesions such as the eruption, gummatous deposits, periostitis, interstitial keratitis, etc., but will

confine the discussion to the results as indicated by the changes in the Wassermann reaction. There are 60 cases in the series who have been under treatment for a period of five months or more. Twelve or 20 per cent. are apparently cured—that is, have had repeated, consecutive negative Wassermann reactions. Twenty or 33.3 per cent. are markedly improved, that is the Wassermann reaction has been reduced to a weakly positive, and in some cases has fluctuated between positive and negative. Twelve cases or 20 per cent. have been slightly improved and 16 or 26.6 per cent. have shown no improvement in the intensity of the Wassermann reaction. One very striking fact about the cases has been that the irregular attendants for treatment have shown little or no progress. Of ten children with whom we have had difficulty in this respect seven have shown no improvement. On the whole the results are very encouraging and particularly so in the young infants where treatment is commenced shortly after the first symptoms appear. Much of the success in the last year has been due to the employment of Sodium Diarsenol instead of Diarsenol and Neo-Diarsenol. The first named drug seems to be particularly suitable for the treatment of infants and children. No reaction of even a moderately severe grade has been encountered following administration during the past ten months, and the effect on the Wassermann reaction has been very satisfactory. My own feeling is that there are few cases of hereditary syphilis which cannot be absolutely cured provided we have the intelligent and interested co-operation of the child or parent.

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# The Victorian Order of Nurses

## The Child Who is "Different"

BY AGNES JOYNES, V.O.N.

OUR nurses begin to show the strain of the long spell of hot weather we have had. A parboiled group, they gather around the table every morning. When one asks another to pass anything at table, it is passed with an oh-I-wish-you'd-stop-bothering-me expression, which makes the asker think perhaps it would be better to walk around after it the next time. Each seems to be wondering where the energy for the day's work is coming from,—the energy to carry a heavy handbag through the red-hot streets, and to stoop for hours over low beds in rooms so close that the poor patient is gasping for breath. Each one hopes that the work, which has been heavy of late, will by some happy chance lighten a little. Hoping against hope, for we know that this same weather is making new patients for us every hour in the day.

"If I had life enough," said one girl at dinner to-day, "I should be worrying about a certain condition which we meet so often and which I am 'up against' just now."

"Stop worrying about conditions!" was the quick retort from another part of the table, "and you'll have more life. Stop worrying yourself and make other people worry a little—those people who have the power to do things, and you will accomplish something."

"What has put the latest wrinkle in your brow?" asks a motherly voice from somewhere else. And the nurse tells her story:

She has just come from a home where her patient, the mother of a large family, was in tears because one of her children could not "get on" in school. The teacher of the busy public school which he attended was having "a terrible time" with him. A neighbor had been tactfully intimating that the child had no brains, or was defective, which the mother considered about the same thing. She declared that he was not defective, he was only "different," and if she had the time, she was sure she could teach him.

She had produced some quite unusual mechanism of the child's invention and asked: "Could a child without brains do that?" She knew, she said, that he was different from the rest of the family; but she also knew that in some ways he was the brightest one of

them all. She looked to the visiting nurse to tell her what to do. "I thought perhaps you could help me!" she had told the nurse, as so many of her patients, under so many different circumstances, had told her before.

It will always be so, I suppose. The one who enters our homes when we are in pain and makes us comfortable, or helps to keep death from our bedsides, will always seem near to our hearts. We sometimes delude ourselves into believing that they know about everything in the way of relief for trouble. We tell them our troubles and listen to their advice and heed it as perhaps we would heed advice from no other source. And so it is in this way that the visiting nurse, while she is doing her bedside nursing day by day, probably learns more about the economic conditions which produce distress and unhappiness, than all of the so-called "investigators" combined.

It is because the people who could remedy those conditions, cannot come closely enough in contact with them to see them as they are; and because they have not been as clearly presented as they should have been by those who do come in close contact, that they exist year after year. It is the privilege and honour of the Victorian Order of Nurses to be able to assist greatly in ridding Canada of many undesirable conditions with which we struggle day after day. Each nurse has been taught to exert all her influence to that end, and we have seen some of the fruit of our labors. We become discouraged at times, but the work is well worth while and we must keep on.

Our nurse is discouraged to-day, but she has done the best she can under the circumstances and she must wait for results. She has begged the mother to work, as she herself is working, for special teaching for those "different" children, whom we in our superior way, term defective. Different they may be, and not always capable of "getting on" with a class in school, but that does not mean that they are defective in that which goes to make successful life. It does mean, however, that our school system is very defective, and that if their education is given over to the busy teacher of the public school, they are going to grow up useless and perhaps with some marvellous talent undeveloped. Lives which might be made useful and comfortable, to say the least, will be miserable and degraded, instead.

That is wrong! wrong! We have no right to set aside as hopeless the child who simply does not happen to possess the "all around" kind of mind which most children have. What if he does



seem to have only a "one track" existence. Perhaps he will be the more useful for that. That means specialization along his own particular line, you know; and specialists are "all the rage" just now. But even should the child show no outstanding faculty at all, still he is not to be cast aside. He can still be taught to mechanically use his hands to earn his own living.

Especially did the nurse recall one thing which her patient had said:—"I am a widow and I do not see how I can afford to have a child grow up useless. Things look pretty dark to me when I stop to think!"

And that is one serious consideration. She cannot afford to have a child grow up useless. Neither can the country afford it. It is being impoverished now by its upkeep of dependent people. I quote from our best authority upon the subject when I state that those children need only the proper teaching and guidance. Then why should we allow thousands who might have been made self-supporting at least, to become dependents, and then pay an army of people, year after year, to dispense charity to them?

Should they thank us for such charity? To have one intelligent, understanding look into such a blasted existence, is to have the charities of all the ages flung back in one's face. A blow not to be forgotten.

We all know that some of those "different" children grow to wonderful men and women in spite of us all. In spite of our misunderstandings and the drawbacks which we put in their way in our so-called pity for them, they have achieved wonders. Many a great man has admitted, when he has risen to the point where he is no longer ashamed of the fact, that the public school teachers had given him up in despair. But he happened to have parents, or some other true friend, to help him out. I know a brilliant physician who will tell you of miserable hours in his childhood when he hung his young head in shame because he was called the village fool. But a competent mother took him in hand, and he was not lost to the world as he might have been. And you know the time-worn saying that in childhood it is difficult to distinguish the genius from the fool.

Nobody is hopeless nowadays, you know. We find that much can be done for children who are not merely a little different from the ordinary child, but whom we have called imbeciles, and allowed to live and die like beasts. I do not know how much is being done in Canada along this line. I am more or less a stranger in the land of my birth—an accident which I hope to remedy in the future—

but I shall tell you a little of that which is being done in another part of the world.

Dr. Downing, a brilliant woman physician of Massachusetts, U.S.A., takes such children and makes them over as you would not believe possible from the material. For example: One of her patients (a child answering to all your ideas of the imbecile—picture him for yourself—the vacant eyes; the open, drooling mouth; the arms swinging aimlessly, weirdly about; the inarticulate attempt at speech; a child crawling on all fours) is a new being after a few years under her skilled hand.

For all those seemingly hopeless conditions, Dr. Downing could see a remediable reason. The loose mouth and the hanging tongue—that was easy. She had his wickedly overgrown tonsils removed, and adenoids which were cutting off his breath. Keep from a child the fresh air necessary to healthy life and you destroy the life both of mind and body. She felt sure that his inability to walk was due primarily to lack of sight. She took the child to an oculist and was laughed at for pains and refused assistance. She took him to other oculists, with the same result.

Did Dr. Downing stop there? Not at all. She simply picked up the little lump of flesh and blood which other scientists were so willing to fling to the scrap heap, and carried it to an optician's office. She patiently placed glasses, one pair after another, upon the vacant looking eyes; and after a while, a pair was used which made the child "sit up and take notice." He showed something which resembled an interest in his surroundings. She worked on until she was sure that she had chosen the most suitable of the glasses at her disposal, and then took the child to her home.

The history of that case, and of others under her care, could be obtained from Dr. Downing herself. I shall not pretend to go into detail. I do not know enough about her work for that. But when I first saw the child, shortly after he had been taken in hand by Dr. Downing, he was breathing through his nostrils, and only rarely was it necessary to remind him to close his mouth. She was teaching him the alphabet—an alphabet made specially to attract the attention of such a child. She was training the aimless, little hands to work in unison with his brain. She was beginning with his finger tips, having him practise holding small pegs between his thumb and fingers, and then placing the pegs in holes in a board. I need not tell you that it was only after much patient directing that the first peg could be held by the unruly little fingers, to say nothing of placing it in the hole at which it was aimed.



But this was improved upon day by day, until she had accomplished that which she sought. She was slowly developing undeveloped faculties which never would have developed without aid. And after many months of patient working, one saw no longer any semblance to the imbecile. One saw a child, apparently somewhat bashful and diffident, but quite an ordinary child. And his brain development had been such and his ability to acquire knowledge, that Dr. Downing thought she could soon place him in a school with other children. I have not followed any of her patients for long, but I know that Yale University has since offered her a department there to work out her theories in her own way.

Now, if so much may be done for such children as those, shall we allow our children who are just a little "different" to be cast aside? Some of them. I repeat will make names for themselves, good or bad according as they have been influenced. Let us see then that the influence and teaching are of the right kind; or we may be sorry.

For instance, one of the neglected ones may rise to a seat in our legislature some day, and then—oh, Canada! Some may get into our nursing profession, and then—oh, poor patient! Some of them (Heaven forbid the calamity) may even become a member of our Board of Health Directors, and then—oh, nonsense! let us return to possibilities. And it is possible to make self-supporting, self-respecting citizens of those children whom we call defective.

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## Social Background

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Emergency Unemployment Work Report of the Toronto Neighbourhood Workers' Association for Winter of 1920-21.

**W**HEN unemployment became acute in the city it was felt that it would be more satisfactory if the secretaries were in district offices, where they could work in close co-operation with the nurses, dealing with the problems that arose in connection with other needs than those of food and coal in the families to which the nurses were giving relief.

### NUMBER AND TYPE OF FAMILIES.

1,526 families, presenting 1,903 specific problems, were referred to the secretaries up till May 1st. Rent was the cause of trouble in more than 50 per cent. of the cases. About 10 per cent. of the total applications were unnecessary, being from people who were more or less taking advantage of the situation, while another 15 per cent. were able to find their own solution through some unexpected wind-fall, or by carrying out the advice of the secretary, before the secretary had to take action herself. Loans were given as a last resort, when there were no other sources of immediate help. One-third of the families had loans. One might note that the working man landlord was much more sympathetic than the well-to-do owner. The families, as a rule, represented a good independent working group. Less than half (652) were known to the Exchange, while 42 others were known to have a record not registered, and from the majority of the registrations one would not infer previous dependency. Only about 150 families present problems that will necessitate continued work by the Neighborhood Workers Association after the unemployment emergency has ceased, and a few others are the responsibility of agencies to which they were immediately referred.

### EMPLOYMENT OF WORKERS.

At least 25 per cent. of the men were laid off from construction work and other seasonal trades. When regular seasonal workers were questioned as to why they could not maintain themselves as in other winters, they stated that the rainy fall caused short time and lessened earnings, that they usually obtained odd jobs, or



worked in factories during the winters; that their friends were out of work and could not lend them money to tide them over.

A little less than half the men could be classed as even semi-skilled, and many men with trades had not been employed at them for months, and had been working as laborers with lower wages and irregular work.

Only one-third of the men were known to be working at work which might be expected to be regular, by the end of April. The average labourer had been six weeks out of work when he applied to the Neighbourhood Workers, while the average, for the semi-skilled, was two or three weeks longer. A few of the men tried to obtain help under false pretences when they were working. They over-reached themselves when they applied for help with rent, and the Secretary asked the employer for the man's record, and if he could soon be re-employed.

There were also a few instances of employers taking advantage of the situation. One firm had a janitor for a year and paid him \$19 a week—on which he could *just* keep his family. In February they

let him go and engaged an old man at \$13 a week. On enquiry they said the first man was a good worker and had wanted to stay, but they knew he could not keep his family on the lower wage, and as they could get cheaper help they did not feel justified in employing him, even though he wished to stay at the reduced wage.

While the majority of the families needed help for debts—whether rent, insurance, light, or other payments—and clothing, there were many varied services rendered. Sometimes the deterioration due to unemployment led to marital troubles. In some families the wife went to work and the husband looked for company elsewhere. The Secretary had to adjust difficulties—sometimes moving the family, sometimes getting work, though rarely was the last ever possible—or somehow temporarily at least patching up a truce. When time permitted, the opportunity was taken to fill some of the many social needs that are found in any group of families.

#### BOARD OF TRADE.

As it was obvious by the end of December that there would be great need for help with rents, the Board of Trade instituted a loan fund, which was of the greatest assistance. This work was done so quietly that possibly the public do not realize what an outstanding public service was thus rendered by the Board of Trade. The

Neighbourhood Workers Association acted in co-operation with the Board of Trade, investigating and recommending families for loans. After the emergency work was over, Mr. Tolchard, Secretary of the Board of Trade, expressed the appreciation of the Board for the work done, in part as follows:

"I am also instructed to convey to you, and through you to the workers associated with you in the Neighbourhood Workers' Association, the sincere thanks and appreciation of the Board of Trade Emergency Loan Fund Committee for the very splendid service which has been rendered during the past winter in investigating and reporting upon applications for rental loans. The Committee has at all times been well pleased with the complete reports which have been presented and the thoroughness of the work of your Association."

While there is no question but that the fact that there was some means of dealing with rents, and other problems prevented a great deal of suffering, it was in many ways disheartening work. The majority of the men wanted work—not help. At first they were optimistic, but as week after week their searching and tramping brought in only enough to pay part of possibly a gas bill, they became despondent and sometimes slouchy in appearance. More genuine thanks were given for a job, secured in most cases, than for material help.

## REPORT OF WORK DONE IN CONNECTION WITH EMERGENCY UNEMPLOYMENT.

JANUARY 1ST TO MAY 1ST, 1921.

### *Main Causes of Financial Stringency in Family:*

|   |       |
|---|-------|
| Cases where problem was caused by unemployment; family were normally financially independent .....                              | 1,269 |
| Cases where problem was due to a social disability in addition to unemployment (not including temporary illness) .....          | 144   |
| Cases where there was under employment, and not sufficient income to keep family independent .....                              | 43    |
| Cases where present financial situation was largely, or wholly due to expense of recent illness, followed by unemployment ..... | 70    |
| Total Number of Families .....  | 1,526 |

### *Specific Problems Presented:*

|                               |     |
|-------------------------------|-----|
| Clothing .....                | 344 |
| Gas, Hydro, Water Bills ..... | 214 |



|   |       |
|---|-------|
| Rent .....  | 1,104 |
| Other debts, medical or household supplies, transportation,<br>special investigation to help decide eligibility for re-<br>lief and miscellaneous ..... | 241   |

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 1,903

*Disposition of Problems Presented:*

(Note.—Where several problems presented by one family, were solved in the same manner, the solution is only included once. Similarly one problem might require a combination of dispositions.)

|   |           |
|---|-----------|
| 1. Unnecessary applications. Family was quite capable of meeting the problem and it was left entirely with them ..... | 183       |
| 2. Advice and direction given which assisted family to meet the problem themselves .....                              | 103       |
| 3. Referred to another agency .....   | 146       |
| 4. Legal aid obtained .....   | 13        |
| 5. Friendly visitor obtained; church connection or family relation strengthened .....                                 | 43        |
| 6. Investigation for Public Health Nurse involving more than ordinary consultation .....                              | 38        |
| 7. Adjustment made with creditor .....  | 107       |
| 8. Creditor staved off until  |           |
| (1) Family obtained work; or aid from friends.....  | 65        |
| (2) Problem had ultimately to be handled, but on a smaller scale .....  | 9         |
| (3) Still pending .....   | 15        |
|   | <hr/> 89  |
| 9. Work obtained.   |           |
| (1) Temporary work .....  | 40        |
| (2) Permanent work .....  | 21        |
| (3) Work was refused .....  | 29        |
| (4) Man secured other work at the same time and so did not take job .....   | 6         |
|   | <hr/> 96  |
| 10. Material Relief Secured, Other Than Loans:  |           |
| (1) Clothing—   |           |
| Through individuals .....   | 100       |
| Through churches .....  | 83        |
| Through organizations .....   | 84        |
| Through relatives .....   | 1         |
|   | <hr/> 268 |

|   |     |       |
|---|-----|-------|
| (2) Supplementary Food—   |     |       |
| Through organizations .....   | 10  |       |
| Through churches .....  | 1   |       |
|   |     | 11    |
| (3) Cash or other Relief—   |     |       |
| Through individuals .....   | 12  |       |
| Through relatives .....   | 10  |       |
| Through churches .....  | 28  |       |
| Through organizations .....   | 63  |       |
|   |     | 113   |
| Total material relief secured .....   |     | 392   |
| 11. Board of Trade Loans:   |     |       |
| (1) Families to which loans were given (56 of these cases had repeated loans, not always from the same source ..... | 444 |       |
| (3) Man found solution before cheque came .....   | 26  |       |
| (3) Refused .....   | 9   |       |
|   |     | 479   |
| 12. N. W. A. gave loan (20 of these cases had repeated loans, not always from the same source .....                 |     | 53    |
| 13. Miscellaneous services .....  |     | 44    |
| 13. Man was told to make a further effort with the landlord, and did not return .....                               |     | 55    |
| 15. Man moved, or working, or found a solution before any action was taken .....                                    |     | 78    |
| 16. Man refused information required, or co-operation .....   |     | 51    |
| Total disposition of problems .....   |     | 1,970 |

#### *County Work:*

Just before Christmas the Neighbourhood Workers Association received numerous appeals from unemployed men living in the county. Many of them were city men, who, not able to pay city rents, moved out but still worked in the city, and like many others were laid off. By the time the City Relief was organized they were at the end of their resources. They tramped in, as before, to the Employment Bureau and discovered that relief was only for city men. They were referred to the Neighborhood Workers Association. The Secretary, if it were necessary, gave an emergency order; later she tried to reach some minister or prominent citizen near the man's home and ask him to visit and help the family if it were wise. Some of the township officials were willing to help, but until



elections were over they did not feel able to spend money on much relief. Christmas week the men came into the office, many of them white and overstrung, heartsick at the Christmas they saw ahead for the children. As far as possible endeavours were made to see that no family missed Christmas dinner, but the fact that all work had practically to be done by long distance phones, and that even these were scarce in the localities, added to the difficulty. Altogether 201 of these men came to the office before the middle of January, when the townships organized their relief on a broader basis and undertook full responsibility, and made unnecessary the weary round that many of the men made in an effort to find help.

M. NAIRN,

*Associate Secretary, Division of Family Welfare.*

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF SEP- TEMBER, 1921.

#### COMPARATIVE TABLE.

| Diseases.                    | Cases. Deaths. |     | Cases. Deaths. |     |
|------------------------------|----------------|-----|----------------|-----|
|                              | 1921.          |     | 1920.          |     |
| Small-pox .....              | 48             | 0   | 93             | 1   |
| Scarlet Fever .....          | 171            | 5   | 188            | 3   |
| Diphtheria .....             | 294            | 25  | 434            | 51  |
| Measles .....                | 14             | 0   | 142            | 5   |
| Whooping Cough .....         | 150            | 10  | 177            | 15  |
| Typhoid .....                | 120            | 31  | 75             | 11  |
| Tuberculosis .....           | 175            | 100 | 180            | 113 |
| Infantile Paralysis .....    | 17             | 1   | 7              | 2   |
| Cerebro-Spinal Meningitis .. | 8              | 8   | 5              | 4   |
| Influenza .....              | 35             | 4   | 6              | 6   |
| Primary Pneumonia .....      | .....          | 98  | .....          | 46  |
|                              | 1032           | 282 | 1307           | 257 |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH, SEPTEMBER, 1921.

|                  | Sept. 1921. | Sept. 1920. |
|------------------|-------------|-------------|
|                  | Cases.      | Cases.      |
| Syphilis .....   | 226         | 157         |
| Gonorrhoea ..... | 166         | 213         |
| Chancroid .....  | 1           | 8           |
|                  | 393         | 378         |



## SMALL-POX CASES REPORTED FOR SEPTEMBER, 1921.

| County.                  | Municipalities.         | Cases.   |
|--------------------------|-------------------------|----------|
| Algoma.....              | Sault Ste. Marie .....  | 1        |
| Carleton .....           | Ottawa .....            | 22       |
| Grey.....                | Owen Sound .....        | 1        |
| Hastings .....           | Belleville .....        | 1        |
| Leeds and Grenville..... | Front of Leeds .....    | 6        |
| Nipissing.....           | Mattawa .....           | 1        |
| Temiskaming .....        | Hudson .....            | 2        |
|                          | New Liskeard .....      | 5        |
|                          | Byfield .....           | 2        |
| Thunder Bay.....         | Fort William .....      | 1        |
| Waterloo.....            | Waterloo Township ..... | 1        |
| York.....                | Toronto .....           | 5        |
|                          |                         | <hr/> 48 |

The reports of communicable diseases by Local Boards of Health for the month of September show a decided reduction in small-pox, diphtheria, measles and whooping cough compared with the same month of last year, as may be seen in the comparative table. The most noticeable decrease is in diphtheria and measles. The deaths from the former are only one-half the number reported in September, 1920.

Some of the other diseases show a low prevalence with the exception of typhoid fever which is generally more prevalent in the months of August and September than any of the other months, and is no exception this year as the returns received give 45 cases and 20 more deaths than in the same month in 1920.

The 35 cases of influenza reported were mostly in the county of Leeds, one township had 30 cases but no deaths.

Infantile paralysis was reported from the following places: St. Catharines 1 death Essex Border, Orillia Tp., Scarboro Tp., Fort William 1 case each, Toronto 8 cases and Orillia town 4 cases.

Cerebro-Spinal Meningitis 8 deaths were reported from this disease from the following places: Ford City 2, Belleville, Euphemia Tp., Petrolia, London, Stratford, Kenyon Tp., 1 death each.

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## News Notes

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### APPEAL TO JUDGE SUCCEEDS IN RAISING M.O.H.'s SALARY.

Woodstock, Ont., Oct. 14.—Judge Wallace yesterday gave his decision in the appeal of Dr. Ruttan, local Medical Officer of Health, who asked for amount named by the judge was \$1,200. The doctor had been receiving \$500.

The appeal to the judge followed a request to the City Council by Dr. Ruttan, which was turned down.

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The Canadian National Committee made a mental hygiene survey of Manitoba in the autumn of 1918, and presented a report to the Public Welfare Commission of the Province. Many recommendations were given, and now that three years have elapsed it is interesting to note the developments that have taken place. More than \$2,300,000 has been spent since 1918 on capital account for the insane and feeble-minded. Great progress has been made in enlarging hospital staffs and in securing individuals of the highest type and training. In 1918 two full-time physicians were in charge of 1,200 insane patients at Brandon and Selkirk. Arrangements were made for the part-time assistance of two other men. What is the situation to-day? There are no less than ten fully qualified whole-time mental specialists on active duty. Indeed, during the summer months, the number was augmented to twelve. Two social workers are employed for mental hygiene duties in Winnipeg, and in connection with paroled patients from Selkirk. Five trained Occupational Workers serve the Psychopathic Hospital, and the Provincial Hospitals at Brandon and Selkirk. A technician is employed at Brandon for laboratory duties. In due course a fully qualified medical pathologist will be added to the staff.

The report of the National Committee emphasized the need of a training school on the farm colony plan, for feeble-minded individuals. The first unit of such an institution has been built at Portage la Prairie at a cost of \$150,000.

The Psychopathic Hospital has proven a great boon to Manitoba. There is little reticence on the part of relatives and friends



to send patients for treatment, and the institution virtually acts as a clearing house for all mental cases of the Province. It is utilized as an instruction centre for medical students attending the University of Manitoba. Students have clinics twice a week.

An arrangement is now being made for the organization of an itinerant mental clinic to visit the fifteen school inspectoral divisions twice a year. The clinic staff will include a physician, social worker, and clerk. Manitoba is the first province to have a travelling mental clinic performing school work—a clinic sustained by the Government.

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The Secretary of the Canadian Association for the Prevention of Tuberculosis was the speaker at the Canadian Conference of Public Welfare, in Montreal, September 28th, in the interests of the Association. Special stress was laid upon the early detection of cases, ample provision for protection of children below par, and assured financial aid with sheltered employment for the afflicted, after leaving the Sanatorium.

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The Canadian National Committee for Mental Hygiene is at present engaged in making a survey of conditions in Alberta by request of the Provincial Government.

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By courtesy of Dr. Amyot, Federal Deputy Minister of Health, time during the programme of the Federal Council of Health was granted for a meeting of the Executive Council of the Canadian Association for the Prevention of Tuberculosis. Nineteen members were present at the meeting in the University Club, Ottawa, October 20th. Arrangements were made for holding a joint meeting with the medical personnel of the Department of Soldiers' Civil Re-Establishment, associated with the treatment of Tuberculosis. This clinical and administrative session will take place in Ottawa after the New Year.

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Dr. J. T. Dunston, Commissioner in Mental Diseases for the Union of South Africa, was the guest of the Canadian National Committee for Mental Hygiene during the latter part of October. Dr. Dunston visited the Ontario Hospital at Whitby, the Westminster Psychopathic Hospital, London, and the many mental hygiene activities in Toronto in which the National Committee is interested.

Requests for the artistic folder issued this year for use by Public Health Nurses, attached to health and educational departments, and at children's clinics, will soon reach the 100,000 mark. It is being produced in English as well as French by the Canadian Association for the Prevention of Tuberculosis. Dr. Baudouin, Superior Board of Health, Quebec, is responsible for the perfect translation of Dr. Porter's excellent "Good Health" message.

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Although the Diet Series, issued by the Child Hygiene Section of the C. P. H. A. have been sold in very large quantities there are still many people interested in Child and Infant Welfare who have not seen these useful little folders, which hold so much information for mothers, and all who work for young children. They are to be obtained at the C. P. H. A. office, 206 Bloor Street West, Toronto.

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It has just been announced at Dalhousie University that the next course in Public Health Nursing will begin October 25th. It will be remembered that in its beginning this course in Public Health Nursing was made possible by the generosity of the Nova Scotia Red Cross in giving scholarships to fully trained nurses who were applicants. The course will be continued by the University under the same admission requirements, namely, that those nurses registering have a good preliminary education and a good general hospital training, including maternity and care of children.

For this year the Red Cross Society, a few days ago, raised its Public Health Nursing scholarship grants from two hundred to three hundred and fifty dollars. The Victorian Order of Nurses, in July, determined to require all applicants for admission to the order to take a course offered in the various universities in Canada. They are offering scholarships of four hundred dollars for V. O. N. applicants.

The demand for Public Health Nurses is increasing in every county of the Province. Dalhousie University in its desire to assist Nova Scotia is giving the service of several professors in the University free of cost. The entire teaching corps engaged by the University for the conduct of this course are giving their time free, because of their interest in Public Health Work.



The seventh annual meeting of the Association of Medical Health Officers of the Province of Nova Scotia was held in Truro, on Tuesday, September 27, 1921—the morning and afternoon sessions being held in the Court House, where rooms had been placed at the disposal of the Association by the municipal authorities, and the evening session, to which the public were invited, being held in one of the assembly rooms of the Normal College.

The meeting was very well attended, instructive papers were received, and much discussion on various phases of public health work in the province took place, which discussion must have been of material benefit to those participating, and to those desirous of being informed of the progress of public health efforts in various portions of the province.

Interesting and timely papers on Venereal Diseases and Typhoid Fever were presented, and were discussed by the members present. A very valuable paper dealing with the historical aspect of an outbreak of leprosy in Nova Scotia, now fortunately for many years non-existent, was presented, was listened to with great interest, and its value fully appreciated by those present.

In addition to the papers which had been prepared for presentation to the Association, many matters of timely interest were discussed. Resolutions were introduced, and passed, in appreciation of the value of the "Canadian Mothers' Book" recently issued by the Federal Department of Health at Ottawa in its assistance to the Child Welfare work being undertaken throughout the Dominion, in affirmation of the advisability of the removal of restrictions on the importation into Canada of Arseno Benzol derivatives, and the removal of duty on Sputum Cups, in support of a proposal to place the compilation of vital statistics in the Province of Nova Scotia under the Department of Public Health, and in favour of calling the attention of the practitioners of Nova Scotia to the importance of greater accuracy in reporting infectious diseases, including venereal diseases.

At the evening meeting, which was an open meeting, valuable papers were contributed by Dr. Craig, the Provincial Red Cross Commissioner, Dr. Gill, under whose supervision the milk inspection of the town of Truro is carried on, and Dr. Royer, the Executive Officer of the Massachusetts-Halifax Health Commission.

These papers and discussions, and the opportunity for practical observation and study afforded by a visit to the Truro Chlorination Plant, provided a programme of more than usual interest and value.

On the same day a conference of the public health nurses, on duty in the province, was held, this being the first opportunity they have had since going on duty to meet and discuss the questions which had been brought to the fore in their year of practical work. The public health nurses in Nova Scotia now number 14 and all were present at the conference. After an interesting morning session, addressed by the Provincial Health Officer, and afterwards devoted to a general discussion of various phases of the work, the afternoon and evening session of the Association of M. H. O.'s were attended by the nurses, or by as many of them whose engagements so permitted.

No doubt can exist concerning the value of the meeting and conference, and the promise these give for more and better public health work being done in Nova Scotia during the coming year as the immediate result.

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## Notes on Current Literature

FROM THE DEPARTMENT OF INFORMATION ON PUBLIC HEALTH,  
CANADIAN RED CROSS SOCIETY.

### *Suggestions for a Red Cross Health Programme.*

Dr. Winslow, Director of the Department of Health, League of Red Cross Societies, outlines for Red Cross health workers useful activities in health study classes, infant and child welfare, public health nursing and in campaigns against tuberculosis and venereal diseases. (Int. Journ. Pub. Health, Sept.-Oct., 1921, p. 488.)

### *Public Health Expenditures.*

An analysis of expenditures on health work in 52 county boroughs in England in 1919-1920 shows that each £100 expended was distributed in the following manner:

|  |      |
|--|------|
| Infectious diseases .....                      | £26  |
| Tuberculosis .....                             | 30   |
| Maternity and Child Welfare .....              | 13   |
| School Medical Services .....                  | 9    |
| Venereal Diseases .....                        | 5    |
| Administration, Food Control, Sanitation ..... | 17   |
| Total .....                                    | £100 |

—(Nat. Health, Oct. 21, p. 48.)

### *Value of Child Welfare Work.*

The child welfare problem is not only a family problem but a community problem, the solution of which depends on the prevention of existing evils rather than attempts to cure the results of these evils. (Bulletin West Virginia Dept. of Health, Oct., 1921, p. 125.)

### *The Industrial Nurse and Her Opportunity.*

A clear explanation of the relations of the industrial nurse to the employer, the employee and the community. (The Pacific Coast Journ. Nursing, Oct., 1921, p. 604.)

### *Syphilis and Infant Deaths.*

Forty-eight per cent. of deaths under one year occur during the first month of life. Natal and prenatal causes are responsible for 43% or more than twice as many deaths under one year as any other cause group. (U. S. Pub. Health Report, Sept. 23rd, 1921, p. 2305.)

*Preservation of Maternal Nursing.*

The readiness with which many mothers wean their babies can be attributed largely to the prevailing ignorance of the properties of maternal milk and its perfect adaptation to the needs of the child. This article details the technique employed by Dr. Truby King for the preservation and restoration of breast milk. (Nat. Health, Oct., 1921, p. 53.)

*School Nursing for the American Red Cross.*

The American Red Cross now employs 1,355 public health nurses for the most part in the rural districts of the United States. During the past year these nurses examined half a million school children and paid visits to over one million homes. (The Pacific Coast Journal of Nursing, Oct., 1921, p. 597.)

*The School Nurse—Her Duties and Methods.*

Medical inspection of school children loses much of its value without a school nurse to act as health teacher in the school and carry the work to completion in the home. This article tells just how she does it. (The American City, Sept., 1921, p. 190.)

*Promoting Employees' Health.*

Since the Bethlehem Shipbuilding Corporation provided a good cafeteria, a better spirit has developed among the workers and the better food has meant better work. (California Board of Health Bulletin, July, 1921, p. 11.)

*Medical Profession and Prevention of Tuberculosis.*

An address by Sir Humphrey Rolleston before the International Union Against Tuberculosis, showing the roles played by physicians in the prevention of this disease. (Int. Journ. Pub. Health, Sept.-Oct., 1921, p. 405.)

*Prevention of Cancer.*

Dr. Wood, of the Institute of Cancer Research at Columbia University, explains the importance of public education as a means to stem the rising tide of cancer mortality. Cancer in its earliest stages is a local growth that can usually be cured by prompt removal of the growth but only a small proportion of persons suffering from the malady consult a physician even when they know they have a tumor. (Health News, August, 1921, p. 170.)



*First Aid in Industrial Plants.*

One of the divisions of the Bell Telephone Company had in 1916 12 lost time accidents per 100 employees. First aid courses were introduced, and the number of accidents has decreased to 1.4 per 100 employees. (Nation's Health, Oct., 1921, p. 543.)

*Venereal Disease Clinics.*

An address by the British Minister of Health before the North European Conference on Venereal Diseases. This paper describes the plan and operation of a model clinic for the treatment of these diseases. (Nation's Health, Oct., 1921, p. 551.)

*Health Service for Insured Employees.*

Ten years ago the Metropolitan Life Insurance Company introduced a health service, which now includes over thirteen million wage earners or their families. During this decade the expectation of life of the insured white male increased nearly four years. This gain cannot be attributed entirely to the health service, but it is a remarkable achievement. (Met. Life Ins. Statistical Bulletin, Oct., 1921, p. 1.)

*Suggestions for Making a Tuberculosis Survey,*

This article was written as a handbook for nurses or others who might wish to take stock of tuberculosis activities and needs in any community. It has been arranged in the form of specific enquiries which make simpler the work of the surveyor. (Pub. Health Nurse, Oct., 1921, p. 497.)

*The Employment of the Tuberculous.* "P. H. Nurse," Oct., 1921, p. 539.

*Publicity and Health Education,* "P. H. Nurse," Oct., 1921, p. 532.

*Prevention of Pneumonia,* "Health News," Sept., 1921, p. 180.

*The A. B. C. of Eating,* "Commonhealth," May-June, p. 120.

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## Book Reviews

*Tuberculosis and How to Combat it.* By F. M. Pottenger, M.D.

Cloth \$2.00. Pp. 273. St. Louis: The C. V. Mosby Co., 1921.

This book represents the substance of Pottenger's talks to his sanatorium patients. It is recognized that success in the treatment of tuberculosis depends greatly upon the co-operation of the patient with the physician, and this can be best secured by instructing the patient both in the nature of the disease and in the measures which have proven of value in treatment and in prevention. It is a splendid addition to the group of books already available to place in the patient's hands. We congratulate the author who, writing from Southern California, has the frankness to say, "There is no specific climate for the treatment of tuberculosis. It can be treated successfully anywhere."

J. H. ELLIOTT.



# The Public Health Journal

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## Some Aspects of Vital Statistics\*

BY DR. A. C. JOST, *Inspector of Health, Nova Scotia.*

THE most popular conception of statistics of all kinds is that the whole subject is one of the most excessive dryness, and that the individual who thinks otherwise or who attempts to form conclusive deductions from the mass of material he has collected, is suffering from some mild mental aberration, interesting, usually harmless,—were it not for the exercise of a curiosity which at times becomes a little too personal,—but from any practical point of view, valueless. To the individual who has this conception, and these are not few in number, the most imposing exhibit of graphs or charts prepared most laboriously and in the statistician's mind pointing to a conclusion which is most compelling, is regarded complacently as evidence only that certain individuals in this universe have peculiar tastes, or is summarily dismissed with the mental observation that figures no less than the individual who uses them can and do, at times so act as to lay themselves open to the charge, which is expressed by the "short and ugly word."

Such an one, however, has failed to realize to what an extent his whole life and action is governed by deductions so obtained. Does he pay taxes? His taxes have been determined from such data. Is he insured? Life tables state the amount which he shall pay. Does he reside in a city? Then his community is in existence, as a result of statistical conclusion. Or country? His prosperity or the reverse depends on the collection of statistical data and the conclusions made from their study. Like the widely known individual depicted by Moliere, who had been unwittingly talking prose all his life, there is perhaps no action of any individual which is not governed by the results of statistical study however little he

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\*Read at the Seventh Annual Meeting of the Association of Medical Health Officers and First Conference of Public Health Nurses of Nova Scotia.

religions, its occupations, its manufactures, its morals, its mentality, the movements and density of population, the status and condition of the enumerated; all these have bearings on its health problems presented, which must be obvious to any person.

It may interest you to know that from the point of view of history, in our own Province of Quebec, long before the time of its coming into English possession, census taking, as considered now necessary, was thought advisable at a date which makes its records among the oldest in existence. Its figures go back to 1665, antedating the first United States census by 125, and the first English by 135 years, and are considered among the earliest of all modern censuses.

But there are considerations which make necessary other arrangements for the collection of information. A business firm can not exist if the attempt at bookkeeping is limited to the preparation of a balance sheet alone, at yearly, not to speak of ten yearly intervals, with no endeavour during the intervening time to determine its assets and liabilities, make provision for bad debts, calculate its stock in hand, and select the lines of endeavour which prove most lucrative as opposed to those which are a constant drain on its capital or which promise to make inadequate financial returns.

Further, there are many considerations which call for the collection and preservation of data, constantly being added to, constantly subject to instant examination under conditions which might be very inconvenient or cumbersome, were too large an area included in the administrative unit, or the information retained and stored at a place inaccessible to those for whose benefit it was obtained.

There are constantly arising questions relating to the descent of property, of the authenticity of birth records, of legitimacy, of age, of genealogy, which cannot be settled by hearsay or gossip. There are necessities for safeguarding the performance of the marriage ceremony, of placing for the benefit of the ignorant and unversed, additional obstacles in the way of its illegal performance. There is the need for recording deaths, since safeguarding life is one of society's greatest responsibilities; and these services should be ones being carried on continuously under conditions which make possible instant reference in a place accessible to the person whose records are therein kept. Consequently the registration of births, marriages and deaths become essential, and so the second great subdivision of vital statistics springs into importance, the collection of mortality statistics.



So far so good, but death is usually preceded by sickness, and the study of the deaths alone does not furnish very much information which it is most essential to have. Besides there are many diseases which are of great economic importance which do not show in the mortality returns; and the measure of a country's standard in public health work is the attitude taken towards the class of diseases called the preventable diseases; those of which a greater or less control has been obtained through years of experience or study. So there is need of information concerning sickness as well as of death.

Return again to the analogy before used, a mercantile establishment, having under its direction many and diverse interests requires some system under which there is prepared for the central office accurate reports of the condition of its various subdivisions or branches. It must be able to determine accurately and instantly its income and its output, must be able to recognize at a glance the department which is in need of supervision or extra effort, in order to bring it on a par with its fellows. The strong department calls for the maintenance of the conditions resulting in its strength; the weak needs bolstering and support. Otherwise it may be led into enterprises in which its profits will shrink, its capital become dissipated.

From a health point of view a corresponding supervision over the health needs of a country is necessary. There must be a certain organization which makes it possible to determine at a glance the actual standing of the living capital of the country, the special source of strength—as indicated by the health reports—which must be maintained, the sources of loss which must be combatted. Preventable disease is the greatest source of loss. We should have early information of its presence and the extent of its prevalence, if we wish to take adequate measures to protect a community from its ravages.

Consequently there is need for the collection of the information comprising the third great subdivision of vital statistics, namely, the morbidity statistics or statistics of disease. The extremely intimate connection between these two, that is, the mortality statistics and the morbidity statistics, is at once apparent, at least to those of us who are acquainted with the aims and ideals of a modern health department. Not always, however, has this been fully appreciated, for only by many evolutionary stages was this concept of such a department accepted, since in the earliest beginnings other than health motives prompted the collection of much of the

data. Of the first of these, the mortality statistics, the first compulsory collection was undertaken by Sweden in 1686—France following somewhat later, and English records dating back about 100 years, but in all these cases the great value of this information from the point of view of conserving the nation's health was not that which prompted the collection. The preparation of morbidity statistics is still more a development of recent times, first attempted for instance in Canada as a whole but several months ago, though the individual provinces have been active in this work for varying lengths of time.

It has been said that the recognition of their value from a health aspect was one of gradual development, a matter of phases and evolutions; so also their manner of collection has altered with the altering appreciation of their value. Where, as in many countries it was the case, the collection of mortality statistics antedated the formation of a properly functioning Health Department, the task of their collection was given to a separate and distinct department or bureau. This was the case in Nova Scotia. All modern procedure, however, tends towards linking up these two services in the closest co-operation, by placing both of these departments under the same administrative head. In a large number of the States, in every province of the Dominion, except Nova Scotia and Prince Edward Island, in short, in every place which has the benefit of public health legislation which conforms to the ideal of modern requirements, or which has been prepared with a view to permit it to have under its control all the agencies calculated to be of assistance in its magnificent and responsible task of conserving the country's health, this is the arrangement which is considered best to meet the requirements. In England the Registrar-General's Department, in existence for nearly 100 years, has recently been placed under the administration of the Health Minister, and the principle is recognized not only as one applicable to nations or countries, but as well to health administrations in large towns or cities. Wherever the health administration is granted the fullest scope; wherever there is made available for it all the agencies it should have under its supervision in the duty of safeguarding public health; wherever, in fact, the most magnificent advances have been made in public health work, this procedure is regarded as practically essential.

If a reason for this closer relationship is needed, the question may be asked, how in this particular does the task of conserving the health of a military force differ from that of preserving the



health of a country? And what would have been the result had the military medical service during the war just passed only had available for its guidance the number of deaths occurring among the troops? The remarkable results in preventive work done in the army was possible only because the organization permitted the instant appreciation of the extent and the nature of diseases of all kinds from which the force was suffering. The more nearly we can secure in our work the same information the more nearly can we hope to show comparable results.

Still a second reason for the closer connection and co-operation of the departments follows the altered concept of the purpose of registration. If, as was the original concept, mere tabulation was the aim, the country's statistical department might well be one, separate and distinct from all others. But, once the value of the department from the health point of view was appreciated, the accuracy of the information collected in fact, as well as in number, becomes essential. This brings into prominence the technical side of the information and emphasises the importance of a technical supervision in order to procure trustworthy and creditable data.

There is a vast difference, though it might not be appreciated by the laity, between military fever and military tuberculosis; the lay idea of dysentery differs vastly from the disease to which the term should be limited; one questions instinctively the report of deaths under one year which are attributed to cholera nostras, and either transparent errors or absurdities tend to lessen the value of reports which, it must be borne in mind, should be prepared to stand criticism in any country, or at any time, when the clearing up of a doubtful point, or procuring additional information concerning a rarity is not possible through correspondence.

Accuracy and correct diagnosis then largely determine the value of the mortality statistics, while prompt reporting is the feature which makes valuable the collection of morbidity statistics. Of what value to a Health Department is the information that scarlet fever was epidemic in a locality some weeks or months before its incidence was reported? Or that typhoid fever with possibly alarming fatality had occurred in a community some weeks previous? How can it attack the problem of preventing the spread of tuberculosis or venereal or any other disease unless it is in a position to judge quite accurately the number of cases in its field of effort? An embalmed record, one hoary with age, is valueless. These statistics at least must not be records of antiquity but the up-to-the-

minute report of the actual conditions present, if they are to be of assistance to the Health Department which gathers them.

The part which the medical practitioners have in the collection and preparation both of the mortality and morbidity statistics is an important one, though the reports made by him may arrive at their final destination—the Health Department—through different channels. His reports to the Registrar of the sex and date of birth and the date and cause of death are the basis on which practically the whole superstructure of mortality statistics rests. So also the collection of the morbidity statistics compiled from the reports of the preventable diseases made by him to the Medical Health Officer of his town or municipality, which is the routine in Nova Scotia, depends upon the carefulness with which he attends to this most important portion of his duty. For it is a duty, recognized as such by any practitioner who has any but the most sordid and narrow view of the place which he, as a public servant, should occupy.

That this unworthy conception is not the one which is that governing the vast body of the medical practitioners is something for which we have reason to congratulate ourselves. Though the request for their co-operation and support in this work can be made to them but on humanitarian grounds, grounds which do not unfortunately give very bright promises of assistance in paying bank drafts, buying gasoline or keeping the home fires burning, the response has been of such a nature as to prove beyond a doubt that the bulk of the profession realize fully the importance of each contributing his mite towards the task of making the presence of preventable disease of all kinds as widely known as possible in order to assist in its suppression and control. Let us not forget that this is not a question of towns or parishes or counties. We are working for the good of humanity as a whole when we trace down and isolate an infectious case till the period of infectivity is past. Infectious disease knows no geographical limitations, recognizes no political boundaries. Its suppression in the most isolated hamlet may have a significance of tremendous moment to the farthest confines of our land. That this is the view of the medical profession, that each one in his field of effort recognizes himself to be responsible to his community, to his country and to humanity as a whole for his attitude in this matter is a reason for congratulation.

This subject is one, at this period, of perhaps more than usual importance by reason of the recent decision of the Federal Department of Health at Ottawa to attempt a compilation of the statistics of preventable diseases, from the reports submitted to it from the



various provincial sources. You are aware that for many years the Public Health Service of the United States has been preparing similar statistics for the area over which it has supervision. The Canadian plans contemplate a similar collection and will result in placing, in the hands of any interested person, for information and reference, figures as exact as may be obtained of the incidence and fatality of these diseases throughout the Dominion. Incidentally, the compilation will furnish a criterion of the preventive work being done in the individual provinces in this regard, and will, to a great extent, measure the efficiency of and the degree of support accorded to the various Provincial Health Departments by the members of the profession among which they work.

There does not appear to be any reason for the belief that the Nova Scotian figures will compare in an unfavourable way with those collected in the other provinces. To do so would confess the presence in this province of a profession uneducated to the realization of their responsibilities as public servants, a public sentiment unappreciative, negligent or irresponsive, or a method of collection, inadequate or perfunctory; any or all of which conditions it is quite safe to say can be disowned.

Not that we have yet attained a degree of perfection which permits a contemplation of the past with a feeling of satisfaction, however. It is quite fully appreciated that the results we have been able to produce cannot be stated to be accurate in fact, or in numbers. Any one who has seen a Division Registrar puzzling over the correct classification of a death reported to him as due to "double choked disks with no localizing symptoms," will realize that there is room for improvement in regard to the question of fact. And any one who in tracing up a scarlet fever outbreak gets fairly satisfactory evidence of approximately 50 cases to find on examination that but a meagre half dozen had been reported instinctively doubts the conclusions arrived at of the numbers showing on the returns. But it is felt that progress has been made, and this feeling encourages the hope of better results in the future, and, I trust, reconciles us all to the task of perfecting the education, of raising the standard of the public sentiment or simplifying and improving the method of collection which shall result in more accurate and more valuable returns.

For it is felt that each of us has in view a better Nova Scotia than that in which we now work and live. And, all working together, is not the future bright with the promise of improvement? My own feeling is that it is.

# Popular Health Education

BY D. A. CRAIG.

**I**N this address the education of doctors, dentists, nurses and those professionally engaged in Public Health work or preventive medicine is not included. We are dealing only with the placing of the principles of health before the people.

Chapin divides Public Health work into three periods. The first concerns itself chiefly with sanitation, the second with the isolation of the sick, and the third or modern idea combines the first two and adds the personal instruction of the individual.

Sanitation is only a part of Public Health work. It requires publicity rather than a detailed instruction of the individual. Clean water and milk supply and adequate sewage disposal are essential to any community, but the means to attain these must be carried out by the community itself. The individual citizen must have, however, sufficient knowledge of the requirements to vote intelligently in support of any means of improvement in this regard.

The education of the individual as to personal health and his responsibilities to those about him plays a very important part in our health work. In this regard one might mention the prevention of tuberculosis infection, the injurious effects of adenoids, and tonsils or bad teeth. These have a special individual value.

Often indeed we find that those interested and trained in Public Health work recognize the health needs in their respective districts, and know just what measures should be carried out by their governing bodies to meet these needs, but are unable to secure the required legislation or financial backing, because of a lack of public demand.

It is the function of any organization engaged in health educational work to mould and create this public demand and sentiment. It is this demand of the people for better health legislation and enforcement which moves governments to productive action.

The same type of health educational work is not suitable in all districts. The people must be approached in a language which they will understand. The coal miner in Cape Breton will not have the same viewpoint as the farmer in the Annapolis Valley. There must

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Read at the Seventh Annual Meeting of the Association of Medical Health Officers and First Conference of Public Health Nurses of Nova Scotia.



then be a study of the individual and a careful consideration of his mental attitude toward health matters. In some cases one must begin by breaking down old superstitions and starting with the very earliest rudiments of health education.

There are two main channels of health education. Firstly the education and training of the child, and secondly the education of the adult. We all realize that the first is of most lasting importance and has a greater bearing upon the future. Children are more impressionable, and the lessons learned are more lasting.

Health lessons taught to children if properly put are readily acquired as health habits. One or two hours a week in the school devoted to health teaching are of inestimable value. Fairy stories with a health lesson, attractive posters, playettes, and tooth brush drills, have a very large place in our popular health educational work. They interest and enthuse the child and readily make of him a real health crusader.

The education of the adult along health lines is a more difficult proposition. Few people indeed will read books, pamphlets, or scientific articles on health subjects. It is necessary to place before the individual something which he reads, hears or sees and readily understands without much appreciable effort on his own part.

A number of the more important agencies for popular health education may be outlined as follows:

1. Public Health Addresses.
2. Pamphlets, reading material, and Posters.
3. Health Exhibits.
4. Publicity in Newspapers and Magazines.
5. Novelties.
6. Health Plays—and Stories.
7. Pictures (a) Movies; (b) Still Pictures.

*Health Address*—In this regard the effectiveness depends to a large extent upon the speaker. If he or she knows how to hold and interest an audience good enthusiasm may be forthcoming. If on the other hand the speaker is hesitant, uncertain and dry, or his voice cannot be heard beyond the front seats he will do more harm than good. Any subject is just as uninteresting as the speaker makes it. Reading a manuscript in a monotonous tone of voice without lifting the eyes from the paper is a fatal mistake. There must be a determination to impress upon the audience at least one or two important points, and these may be illustrated by appropriate stories or local references. It is a mistake to try to put over too much in one address. Many of the audience will become con-

fused and misunderstanding will result. Then, too, one must remember not to overdo it by being too long winded. It is always well to stop when your hearers are wishing you would go on rather than when they are wondering if you ever will come to the end.

Papers and short addresses by lay people to societies and clubs often have a distinct value. There is a stimulus to the person preparing the address as well as to the audience who are made to feel that these health matters are not alone the field of doctors and nurses.

*Pamphlets, Reading Material and Posters.*—Pamphlets in the form of bulletins are very frequently issued by Health Departments and serve a useful purpose in keeping the work of the department before the public. They usually contain interesting statistics, but reach only a certain group of people, and from the standpoint of public health education do not always play a very important part. Circulars issued for adults may cover a variety of subjects, but as a rule it is better that only one subject be covered in each circular. The reading material must be plain and concisely arranged, and there must not be too much of it. If a mother receives a pamphlet on the care of the infant shortly after the birth of her child, the personal interest in her own offspring will naturally lead her to study the pamphlet carefully. People who have tuberculosis and know it, or perhaps have been in close contact with tuberculous patients will most likely give attention to any circular issued on this subject. The man in the street, however, is not very likely to spend much of his time in reading circulars or pamphlets of this kind. For him we must resort more or less to the tricks of advertising. Advertising plays a very important part in the business world to-day. Health is a purchasable commodity. It can be bought and sold. Why, then, should it not be advertised. Well illustrated posters, designed by good Public Health workers and produced by reliable artists are very valuable indeed. Poorly illustrated and designed posters are of little use, and may even be ludicrous. The picture or design of a poster should have sufficient attraction to lead the observer to read the printed matter.

Children's booklets in colored prints, well illustrated and with catchy stories are extremely useful. Nursery rhymes and fairy stories with a little health lesson woven in, leave a distinct impression on the mind of the child. Good posters for children are obtainable and may be hung in the school room or nursery. If they are attractive and simple they will have their health lesson for every child who sees them. Fairy stories and health posters give a won-



derful impetus to health teaching in our schools. The old idea of teaching a child that his stomach was in the abdominal cavity under the diaphragm had little if any significance as far as health was concerned. What matter if the child knows where his stomach is provided he knows what to put in it?

*Health Exhibits.*—We find our merchants spending a great deal of money and giving considerable time to the dressing of their store windows. They even employ experts to do this. Why do they do it? It is another factor in the advertising game. If then we are advertising health, why should we not carry out a similar plan. Health exhibits may be arranged without a very great deal of expense and may be carried from place to place. Exhibits may be illustrative of any branch or several branches of health work. In recent years the Department of Agriculture has sent an exhibit through the country in a railway car and many Health Departments have carried out a similar plan. Exhibits at exhibitions have a certain usefulness in drawing the people's attention to the need of health work and how it may be carried out.

*Publicity in Newspapers and Magazines.*—Short sketches or articles in newspapers or magazines written in a popular way have a certain value. Much depends, however, upon the ability of the writer to make a health lesson interesting. The value of paid advertising in public health work is to my mind questionable. The best effect in this regard may be secured by creating a situation concerning which the papers themselves will write.

*Novelties.*—Under the heading of novelties one must give attention to the clown and the health fairy. It is surprising indeed to note the effect that such novelties have, not only upon the mind of the child but upon the adult as well. Floats and health parades play a very useful part under certain circumstances.

*Health Plays and Stories.*—Little health plays or playettes as they are called, are specially prepared and written for children. They have a distinct place in interesting the child and teaching him a health lesson; as well the parents will always go to see these playettes and they, too, will secure a lesson.

*Pictures.*—The still pictures or lantern slides have for years occupied an important place in our health work, and it is not necessary here to say very much in this regard, as we are all acquainted with this subject. We have come now to probably what is the most important feature in putting over public health lessons—the moving picture. The educational film has an assured future and it will probably not be many years before every school and every educa-

tional institution will be fully equipped with a motion picture outfit to supplement lectures and other means of teaching. Good films on public health subjects are now obtainable. The film must have a human interest story or a humorous tendency in order to hold an audience. Some years ago people would go to a movie simply to see a man walk on the screen or a barrel roll down a hill, but to-day the popular taste has become quite factitious, and there is a demand for the best acting and technique in pictures. It is usually a mistake to do any speaking during the time a reel is being shown for the reason that the subject changes rapidly and the observer is apt to lose the trend of the picture if he attempts to listen to the speaker. Some of the more modern moving picture machines are designed so that the films may be stopped while the picture is being shown, giving the speaker an opportunity to speak while the picture is on.

If we are to stimulate an interest in health matters we must get people thinking about health. Even a vigorous opposition to a public health programme is better than a casual indifference. It is our duty as public health workers to place before the people of this province the community needs and the personal benefits to be attained, by a well organized campaign for better health.

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Dec 1921

## Special Training For Public Health Nurses

BY MISS E. KATHLEEN RUSSELL.

**F**OR the public health administrator who is keen to see the development of what Sir George Newman calls the auxiliary services of his work, the training of the public health nurse is necessarily a question to receive attention. It seems to be generally conceded by both Canadians and Americans that graduate nurses are to do this work which our English cousins call health nursing. This is a rather comprehensive term including school and various types of clinic work, and the educational and follow-up visits in the home incident to any scheme of organized public health work; in many cases the public health nurse's duty also includes some bedside care for the sick. It is evident that we want a worker who is both a nurse and a teacher.

Pending any better arrangement, it has been agreed, at least in this country, that a hospital training is the best preliminary teaching for this public health nurse, but it is just as fervently agreed that a hospital training alone does not fit a nurse for this special field of work. Hence the demand, which came from the nurses themselves and their co-workers, that the special training which they needed should be forthcoming.

For several years, American colleges have been offering these specialized courses for public health nurses, and it has been in American colleges that Canadian women have been trained. Consequently these same Canadians have continued to work in the United States, and may be found there to-day in fairly large numbers. Two years ago Canadian nurses, through their professional organization, urged that public health training be made available for them in Canada. In response, six Canadian universities have made provision for this work, and others have tentative plans which may be put in operation at any time. In February, 1920, Dalhousie University, in Halifax, inaugurated the first of these courses in public nursing; in September and October of the same year, the University of Toronto, McGill University, and Western University of Lon-

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\*A five year course of combined Arts and Nursing, the first two years of which are to be spent at the University, the third and fourth in the hospital training school, and the fifth in special training. A degree from the University and the training school diploma will be given at the end of the double course.

don followed suit; in November, the University of British Columbia added a course in public health to the work for nurse education which had already been undertaken there, and in January, 1921, similar work was begun at the University of Alberta. These courses at Halifax, Toronto, McGill, London and Vancouver all cover one academic year which entails about eight months of work. Lecture courses and practice work are both included in the curriculum, the aim being to give the student a general training that will enable her to work acceptably with any public health administration, urban or rural. It is hoped that the special claims of rural work may be emphasized so that graduates will be prepared to undertake that work.

In considering the need of public health nurses for rural work, I wish to make a suggestion to the medical officers of the small towns and county districts. Will you encourage the giving of scholarships from your locality to well trained nurses who belong to your particular town or district, with the understanding that these nurses return to that county for a certain definite period after graduation. With some thought given to the working out of the detail, a splendid group of rural nurses could thus be enrolled. You may not wish to give scholarships, but at least you might recruit a student and offer some satisfactory suggestions that will induce her to obtain this training. Again, you might get some provincial association to interest itself on behalf of your needs for rural workers. You must understand that at present the larger number of students taking this special training are already residents of the city where the course is being given. After graduation many of them must still remain residents of the city in which their homes are placed, and can accept only such work as is offered there.

Many scholarships are now being given to nurses to enable them to take these courses. We are glad of that because it means that the mere chance of financial standing will not determine the personnel of our classes. Probably the custom of giving scholarships and bursaries will steadily increase in our universities, and so opportunity will be greater for all to receive the training they desire. The Provincial Red Cross Societies are doing most valuable work by giving scholarships to well equipped nurses, and have thus been a strong force in enabling these university departments to enrol desirable classes. For the current year, 1921-1922, the Victorian Order of Nurses is also giving a large number of scholarships, distributed among the various provincial universities, and in this way has given some particularly promising students this opportunity.



So special training for the public health nurse is now available in Canada. Such work is still only in the experimental stage, and it is difficult to tell which way it will develop. There is a probability that the three years' hospital training may be adjusted to admit of specialization in the senior year, and thus the routine workers might be prepared for the public health nursing field in three years, instead of four as at present. One thing, however, is quite evident, and that is that we need a greater number of highly educated women for the teaching and administrative posts in the nursing profession. As the work of the profession expands, the need for these increases proportionately. We must not leave the filling of that need to chance. Our present university nursing departments should be developed until we find a reasonably economical adjustment, so that university graduates may pass on to nursing schools, or nurses back to university work without unnecessary loss of time, and find provided for them a carefully arranged sequence of study and training, the result of which will be in proportion to the time and energy expended. We have had under-education in the nursing profession, and it produced Sairey-Gamps; let us try over-education, that bogey of the highly imaginative, and see if the results will really be as dire as some pessimists suggest.

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# The Social Aspects of the Venereal Disease Problem

BY EDNA L. MOORE, *Social Service Nurse, Division of Venereal Diseases, Provincial Board of Health of Ontario.*

**I**N considering the social aspects of the Venereal Disease Problem we are not entering a new field. For centuries community conduct has been mirrored in community health.

More than three thousand years ago Moses commanded that all captive Midianite women, not virgins, must be slain. Why? Because only a few years before a plague had come upon Israel, because of certain conduct instigated by Midianite women.

Time will not permit to trace this relationship through the intervening years. In our own time we have much to emphasize it. The Sydenham Royal Commission report in 1916 brought many facts to the mind of the British public. An investigation was carried out in Ontario in 1917 with the result that in the session of 1918 the Government passed the Venereal Diseases Prevention Act. This was supported by a Federal measure—the voting of money to the Provinces on condition that an equal amount be voted by the Provinces themselves.

Clinics have been established by the Departments of Health; the education of the public mind is progressing. The formal aims and objects of the Canadian National Council for Combating Venereal Diseases are in part:—

1. To combat venereal diseases by whatever means seems desirable.

2. To encourage and assist in the dissemination of a sound knowledge of the physiological and moral laws of life in order to raise the standard both of health and conduct.

In every instance mention is made of anti-social conduct. The fact that, among sex offenders, a higher percentage of disease is found than among other convicted persons surely means something definite to us.

In the past we have heard said that the problem of venereal disease should be relieved of all moral and social issues and be

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placed solely on the ground of the control of communicable disease. There are yet some adherents to this belief. I approach this question with the firm conviction that the moral issue is the more important but it must not be divorced from that of Public Health. Moral tendency has its mainspring in Spiritual and Ethical convictions, the matter with which Father Minehan (the next speaker) will deal.

The family is the oldest institution we have; let us consider how it may be affected by V. D.

There is the case of John Smith, who in his youth was given free rein to sow his wild oats in the firm belief that he would settle down later to a proper family life. In a few years he married thinking himself cured of the disease that he had contracted. Years have passed; there are two boys in the home—twelve and nine years of age. The husband became violently insane, and was committed to one of the Ontario Hospitals for the Insane. The wife was left with no savings and having had no vocational training was obliged to take work washing dishes in a restaurant from 8.30 in the morning to 5 in the evening for \$10.00 a week. With this mere pittance she had to face the task of paying \$18.00 a month rent for her cottage, providing food and clothing for herself and two boys. Her husband died in two years at the age of 36. In the course of a few months an investigation was being made of all possible contacts of cases of death from syphilis. This case was registered, Cause of Death, Paresis. The home was visited by a social service nurse, who was sufficiently tactful to persuade the wife to attend a medical clinic presumably because she complained of pain in her side. However, before the clinic day came the nurse had communicated with the social service nurse of the Out-Patient Department. The history was given and arrangements made for a blood test to be made. The reaction result was V. S. P. Mrs. Smith was then persuaded to bring the boys to the clinic. The older boy, who is almost an incorrigible, was also V. S. P. and the younger one negative. It was then found from history that there had been three children, the first stillborn. The doctor in the clinic explained something of her condition to the woman and she agreed to start treatment at once and bring the boy. Her rent was falling behind; the children needed clothing and the woman sadly needed a friend. A social agency, well known for its constructive work, has taken the family in hand. The older boy has been taken from school and put to work at the age of fourteen as his earnings are so badly needed.

Had this father and mother been educated to tolerate only the single standard of morals, this home would not present such a social problem, and had they received the examination at the time of the still birth that we would reasonably consider necessary to-day, would the future not be more hopeful for these boys? Is it not probable that the father might yet be the head of his family? At this stage the family doctor could do a great deal, but who will pay. Socio medical work demands time and the busy doctor has many other cases. Under such circumstances the state will suffer financially. These two persons must be treated at the public's expense, and the boy's whose education has been limited will, no doubt, be industrially much less efficient. These are the inevitable results of "wild oats."

There is the sad break in the home where the daughter has fallen into questionable ways. She may have left her home for the city. The newcomer to prostitution is frequently a runaway girl with not sufficient will power to abandon the life voluntarily. She has not paused to consider what was before her. She has been drifting. She may have been deserted by the man who promised to marry her and has been turned from home when it was discovered that she was to have a child. Her parents do not see that anything worse can happen to her than that she should have sacrificed her virtue; they do not realize what depths of degradation are possible for her through prostitution. Without the slightest consideration whether or not she will be improved in character, they insist on teaching her a lesson when it is nearly twenty years too late.

We might mention sterility. There is the incompleteness of the childless home, and the loneliness of the one child family, sometimes the result of gonorrhoea.

The chronic prostitute or the old timer as she is known to the other girls, has given up all hope of escape. She has had no vocational training. She is bound as truly by fetters as though it were a physical servitude. She is confident that the hand of society is raised against her and she cannot believe that there is anyone in the world who, from an unselfish motive, really wishes to help her. Always there is a spirit of unrest and of fear, and if she drowns herself in drink and drugs it is merely to forget. She becomes less attractive in appearance, less clear in perception and less concerned about what becomes of her. She believes she is being pursued and at each step, nervously looks behind her. She tells marvellous stories about herself which are neither true nor the product of her



once vivid imagination. We realize that her hallucinations are the result of a drug and that she is in the grip of opium or cocaine. We are not surprised to learn later that she has become a ward of the State in an insane asylum.

Like all of us, these girls had the same potentialities, both for good and for evil, but instead of meeting forces for strengthening and upbuilding character, they had come in contact with vicious influences.

The relationship between mental defectiveness, delinquency and venereal diseases is easily recognizable—many feeble-minded children show precocious sex knowledge—are noticeably erotic, have immoral habits and tendencies and teach other children vicious practices. They are easily influenced, choose inferior associates and are subject to none of the checks operating upon normal individuals. Their inefficiency in work causes them to be discharged frequently and to drift from one low grade occupation to another. There are seldom any restraining influences in the home. They readily become the prey of vicious men and women. Is it any wonder that the boys often drift into crime and the girls into a life of immorality? It is obviously the easiest way. Many of the young women give birth to one or more children and later join the ranks of prostitution. These cannot be reformed. Only a safe environment will save them. Their deficiency is congenital; intellectual development is impossible, yet had society safeguarded them from the time they were children, instead of being on the way to becoming the most hopeless dregs of humanity, they might now be living happy, useful lives, and society itself would have been saved the financial burden of their feeble-minded offspring.

For the social prevention of any communicable disease there are two main lines of work.

1. Measures intended to prevent the conveyance of infection from persons known to be infected;
2. Measures calculated to remedy those conditions of life which favor the propagation of disease.

The first belongs to the physician, the nurse and the social worker. In the large centres where a V. D. clinic is in operation a social service nurse is attached. Her work is almost parallel to that of the "trouble man" in a large industry or business concern, or as I recently heard her described as the "shock absorber."

The machinery of society needs a go-between as much as the machinery of business.

In the case of patients receiving treatment for gonorrhoea and syphilis it is necessary for some one whose time is not so valuable as that of the doctor, to encourage the patients. To obtain their full co-operation it is necessary that they understand their exact condition so far as they are mentally capable; also the relation of their handicap to the economic situation and their responsibility for posterity. The social service nurse obtains a social history of each girl and woman; and just here let me say that it's very difficult and most unsatisfactory for the nurse to take the social histories of the male patients. If there is history of immoral conduct the doctor can easily obtain this while taking the man's medical history. The man's honesty may be appealed to with the result that he will persuade his partner to report to the clinic for examination and diagnosis. But many men and women suffering from V. D. do not attend clinics. They are treated by their own physician. Apparently the most difficult problem is the one when the husband is diagnosed and he is told by the doctor that his wife and family may be infected. His first thought is of secrecy—he foresees a catastrophe in his home. The doctor will point out the only possible line of action, but he is often hindered in his efforts in that he is not the family physician. If, however, he is the wife's doctor he can examine her without causing suspicion. If she is infected she will want to know why she is advised to take treatment, and the average man and woman of to-day understands to a degree something of anatomy and physiology and they expect an explanation of the diagnosis made. The reign of the magic medicine man is past and the day of the socio medical practitioner is here. It has been found possible by careful approach to the home to prevent the catastrophe of divorce, and I know of two families whose domestic ties have been strengthened as husband and wife persisted with treatment under the orders of their doctor, in spite of the interference of relatives who advised separation or divorce.

The second measure for prevention is in the hands of the intelligent citizen. Every community has organizations that would willingly assist the doctor if he will but call upon them. Every church has its associations and they want to be used. I appeal to you as leaders of community work to use these clubs until they have caught the broad vision or if laggards, until they have fallen by the way.

We have seen many flaws in our social fabric. Where are the remedies? Have we access to them? Yes—And they must of necessity be along constructive lines.



Parents and teachers must co-operate in the teaching of their children for we will remember that children are born with racial instincts, family tendencies, but without habits. They must be taught by example and precept that the home is the centre of happiness; that marriage means taking the responsibility of a home.

Better recreation is imperative—re-creation four-fold, mental, physical, social and spiritual. We find this exemplified in Girl Guides, Boy Scouts and Canadian Girls in Training. Increased athletic facilities, out of door games where normal companionship between boys and girls may be stimulated, are very necessary. Education in physiology, the psychology of the emotions, in household arts, child care and manual training. This should be balanced by a common interest in community life, its problems and their solution, impressing upon them their responsibility as citizens for the underprivileged in society and the establishment for all time of the single standard of morals. These suggested remedies demand law enforcement with reference to undesirable commercial amusements. This is the age of social legislation. We have all noted the number of bills relating to social questions introduced in the recent session of the Legislature. It is part of the process of evolution in Government, and the way we deal with it at the moment will dictate whether the result shall be the greatest possible or not. If social legislation is to be robbed of the benefit of science, then, however, just the aim, that fairness which would be supplied by scientific accuracy will be wanting. The appeal I make to you to-day is the appeal to add to social legislation scientific judgment and fairness, so that the pendulum of law enforcement may not swing too suddenly to the extreme, but remembering that

“A man’s reach should exceed his grasp,  
Or what’s a Heaven for.”

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# The Importance of Teaching Mothers the Proper Breast-Feeding Technique

BY DR. GEORGE SMITH, *Toronto.*

THE importance of breast-feeding in the problem of the reduction of infant mortality has not as yet been fully realized. True, we say that 10 bottle-fed babies succumb to disease to one breast-fed infant, but the fact has not made the laity any more anxious to refrain from bottle-feeding, nor has it resulted in making physicians preach the importance of breast-feeding to their patients. The charge is often made that the mothers of to-day are not anxious to nurse their offspring. We think this to be untrue and rather feel that the trouble is that often they do not know exactly how to solve certain simple problems which they all meet. The glowing pictures sent them by various patented food concerns combined with the fact that their written instructions makes feeding clear to them, too often result in their changing to some artificial feeding.

There is no doubt but if expectant mothers made it their business to learn all about the technique of breast-feeding we would have a great many more babies enjoying the advantages of Nature's food. As yet, there is very little source open to them for the study of such problems. Realizing this to be the case, the Department of Public Health, Toronto, through the Division of Child Hygiene, is at present preparing a pamphlet on this subject, outlining the principles underlying the secretion of milk, the amount of milk required for babies of different weights, the proper feeding interval, etc. Besides the P. H. nurses have been concentrating on this subject and expect to be able to render valuable assistance to the physicians, by visiting the house of the expectant and nursing mother.

This work was undertaken following a study of our infant mortality table last year. We found that of 1,419 deaths 303 had been premature infants, 224 died of gastro-intestinal diseases, while 248 deaths were caused by such diseases as pneumonia. In all these conditions a breast-fed child has a much better chance of surviving than a bottle-fed infant. It was impossible to learn how many premature babies have been breast-fed. It has long been felt that



to save premature infants two essentials are necessary. They must be kept warm; they must be fed breast-milk. The deaths from gastro-intestinal diseases are in a great measure caused by summer diarrhoea and decomposition, due to improper bottle feeding, i.e., cases in which if babies could have been kept on the breast-milk, this fatal result would have been avoided to a great extent.

And, lastly, there was the group of deaths due to the diseases of bacterial origin. It has been claimed in the past that a certain amount of immunity is transferred from the mother to the child by her milk. Whether this be true or not, at least we know from our clinical experience that breast-fed babies have a much lower mortality from such conditions than have bottle-fed babies. Any properly nourished child should have more resistance than an improperly nourished one. So much is this the case that breast-fed babies are often called lobar babies, meaning that if they develop pneumonia it will likely be this more favourable type; while babies fed on the bottle, if having nutritional disturbances, develop the bronch-type of pneumonia under the same conditions.

The greatest boon which could happen in connection with breast-feeding would be that every expectant mother might receive early in pregnancy instructions which they might learn how to carry out. A spirit of morale would soon be developed which would make every mother anxious to do the best for her infant. The result would be an application to those things which would be of great value later on. The knowledge of a proper diet, of the correct amount of exercise, and the technique of breast-feeding should easily be acquired.

This understanding of right principles would go far towards putting her in the right mental attitude towards later breast-feeding problems. The elimination of false ideas, such as the fear that because her own mother had not nursed her children, she would not be able to do so, or the fear instilled by some misinformed pessimist that her milk might not agree with the baby—the elimination of these ideas, combined with a few simple instructions would soon establish a confidence in herself which would ultimately result in successful nursing. There is no doubt that success here is often largely a psychological problem. Physiologists tell us that there is no known diet or drug which of itself will stimulate the flow of milk. Yet how often one hears of different preparations or foods which will do this. The mother has faith because of a confident, inspiring nurse or doctor, who tell her this will increase the flow. Just what principle is at the bottom of this phenomenon is difficult

to say. The same cause may explain the action of worry, fright, etc., on the diminished secretion of milk. Cases are known to all when the milk supply apparently has stopped over night following some mental strain. May the same explanation be involved in those cases where a cow is supposed to be holding back her milk following some fright from dogs, etc.?

Enough has been said to suggest that the mental attitude of the mother is of great importance. Freedom from worry, a confidence in herself, that she is able to nurse her baby, and a knowledge of the correct technique usually carries success.

Just a few words about diet. It has been shown that during the prenatal period, about 5% increase in the usual daily consumption of food is all that is necessary. The great increase which some women take—

1st—makes the child larger and so increases the danger at labour.

2nd—tends to make the mother herself fat and lethargic—decreasing the functions of all the glands.

After the birth of the child, the added strain on the mother's nutritional organs is taken care of by an increase in her diet which, measured in cows' milk, should double the amount of breast-milk given. She should eat regularly, a plain wholesome diet, having no fear that any ordinary article of diet will upset her. Excessive consumption of fluids is uncalled for and tends to decrease the mother's appetite for her regular meals.

There are two fundamental requirements for the regular secretion of breast-milk—namely "*Stimulation by Suckling*" and "*The complete emptying of the breast at each feeding.*"

The suckling of the healthy baby stimulates the breast to further output. If a baby is not getting sufficient milk from one breast—then the nursing from two breasts at each feeding may be resorted to. This increases the total amount of milk—the amount being increased in each breast. If nursing every four hours the baby does not get sufficient, then nursing every three hours should increase the supply. At this point may we draw attention to the fact that the baby should be nursed regularly by the clock. By doing this, the stomach has a period of work and rest, as long as the baby is not nursed more frequently than every three hours. It takes about two and a half hours for the stomach to empty itself. An interval shorter than three hours should, therefore, never be used. Most babies do better on a four-hour interval than on a three hours. As to whether the 3 or 4 hour interval is used



is decided by the amount of breast-milk available—if coming freely—of course use the four hour interval—if not so freely—the three hour interval.

The second and equally important principle is the complete emptying of the breasts. A breast which is not completely emptied soon begins to secrete milk—while one regularly emptied has a uniformed sustained supply. One frequently finds a mother wanting to replace a nursing by a bottle. This of course lessens the amount of milk secreted, for the breast loses a stimulation and is not completely emptied at the usual time.

Another class to be spoken of is the premature infant. These babies are not strong, do not nurse vigorously—therefore there is poor stimulation and incomplete emptying of the breasts—of course this case has but one result—soon there is not sufficient milk in the breasts and the baby finds it more difficult than ever to obtain a supply.

It is in this type of case, that manual expression of the milk is most useful and indeed be the means of saving the baby. The ampullæ or reservoir are just beyond the coloured areola of the breast. By use of the thumb and forefinger, starting in this area, the breast is grasped and with a motion similar to that of a milk-maid's in milking a cow, the milk ducts and reservoirs are emptied. No undue force is used. The results are much better than a breast-pump. The milk obtained in this way is fed to the infant by a dropper or Breack feeder. The thorough application of this principle until the premature infant is strong enough to nurse will save many babies.

In the type of pamphlets previously mentioned, which should be available for every nursing or expectant mother, and put in their hands as soon as possible. Several points should be considered:

1st—An assurance that every mother should be able to nurse her baby if she prepares herself to do so by following the rules laid down, and so gain confidence in herself.

2nd—Instruction as to diet, recreation and sleep.

3rd—An outline of the principles underlying the secretion of milk, i.e.—

1st. Stimulation by nursing.

2nd. The importance of emptying the breast, at each nursing.

4th—Informing the mother that a baby getting the correct amount of nourishment is seldom sick. That the trouble is caused by the infant obtaining too much or too little milk. That this is

proven definitely by weighing before and after nursing to learn how much the baby obtains and by referring to a table to show how much it should get for its weight.

5th—Setting forth the principle that when the mother did not have sufficient breast-milk that a nursing from both breasts should first be tried and if this were still not enough—the completion of the feeding by a modified milk formula. Not by weaning.

Such a pamphlet with the assistance of the nurse or physician should help very materially in substantially increasing the number of breast-fed infants.

We print below a copy of the "Bulletin" on "Breast-Feeding," mentioned in Dr. Smith's paper.

Over 6,000 of these were disposed of in two months, which proves the point emphasized, namely, that the public is looking for information on this most important subject:—

Department of Public Health,  
City Hall, Toronto.

#### BREAST FEEDING.

Recognizing the fact that the greater number of infant deaths occur among babies that are bottle-fed, the Department of Public Health is endeavouring in various ways to encourage breast-feeding.

One often hears it said that the mothers of to-day are not anxious to nurse their children. We feel that this statement is untrue and unjust, and rather think the difficulty in the breast-feeding problem is that the mothers do not know how. In many instances the mother is not familiar with the principles underlying breast-feeding, and does not know how easily any difficulties can be overcome.

With the intention of instructing mothers when necessary in proper breast-feeding methods, the department arranges to have a public health nurse visit each mother, as soon as possible after the birth of the baby has been registered. Therefore early registration means a great deal, as often in the first week or two breast-feeding is given up, because of the lack of knowledge of the methods of stimulating and increasing the flow of milk.

Your co-operation is needed, even if our instruction is not neces-



sary in your case. Help us in attacking this problem which means so much to the babies of Toronto.

#### PRINCIPLES UNDERLYING THE SECRETION OF MILK.

There are three chief facts in regard to milk production which must be known to enable you to nurse your baby successfully. *The mother requires an increased amount of nourishing food and an increased amount of fluids.* The fluids, however, should not be increased to the point where they interfere with the mother's appetite for her regular meals. The diet should be well balanced, plain and wholesome, slightly more than usual amount. One quart of milk daily should be taken.

*The act of suckling stimulates the formation of milk.* If, therefore, there is not sufficient milk in one breast to supply one complete feeding, the two breasts should be used. This extra nursing will stimulate the formation of more milk. The use of two breasts at each feeding increases the amount of milk, and does not decrease it, as it is sometimes thought.

*To maintain an even flow, the breast should be completely emptied at each and every nursing.* The practice of dropping a nursing and replacing it with an artificial feeding is one of the most frequent causes of the breast drying up.

#### NURSING.

The new-born baby should not be put to the breast for six to eight hours. During the first 24 hours, the baby should not nurse more than four times, but at both breasts each time in order to stimulate the secretion of the milk. If the baby cries much, he should be given boiled water, without sugar, midway between feedings.

Beginning with the third day, the baby should nurse *regularly* every three or four hours, as directed by your physician. The baby is to nurse from one breast at each feeding, alternating the breasts or taking both breasts each time, according to the amount of milk secreted, as shown by the baby's satisfied appetite. The total time of one nursing should not be longer than twenty minutes|

The premature babies and some full term babies such as those low in weight (5-6 pounds), do better when nursed every three

hours instead of every four hours, that is, at 6 a.m., 9 a.m., 12 noon, 6 p.m., 9 p.m., 12 midnight.

Feed regularly by the clock, even if the baby is sleeping. You will soon train him to awaken at the proper time. Regularity in habits makes the baby comfortable and keeps the milk secretion uniform. If the baby is acting like a normal baby as regards sleep and growth, he is probably getting the right amount.

If the baby is not getting enough milk, a fact which would be indicated by stationary weight, or slow gain, by waking before the proper feeding time, etc., then the baby should be allowed to nurse for 10 minutes from each breast at each feeding every three hours.

If the baby at the end of a few days is still not receiving sufficient nourishment, the required amount should be completed after nursing by a modified milk feeding as prescribed by your physician.

If the baby is getting too much, a fact which would be suggested by too rapid gain in weight, vomiting, colicky pains, gas, fat curds in stool; then the baby should only be nursed from one breast every four hours.

If the baby vomits, it may be due to obtaining too much milk, or to obtaining it too rapidly. In such cases, an ounce of water given before nursing may correct the trouble.

If the baby has colicky pains or gas, after nursing, hold it in an upright position until it gets rid of the wind or gas which has collected. The easiest way to do this is to hold the baby over your shoulder.

It is usual for a normal baby when it weighs nine to ten pounds to be nursed every four hours.

When weighing the baby before and after nursing to ascertain the amount of breast milk it is getting, it is well to remember that since the amount may vary slightly at different nursings, it is well to weigh if possible, after two or three nursings at different hours.

In case a mother has not a pair of scales for use in estimating how much the baby is obtaining at a nursing, she may take him to a Child Welfare Clinic. By telephoning the Department of Public Health, Main 16, she may learn where the nearest clinic is located and the time it is held. These clinics are only for well babies. Advice is given the mother to aid her in keeping her child well, particularly along the lines of proper feeding. Facilities are provided for weighing the children. A physician is in charge.



TABLE SHOWING AMOUNT OF FEEDING FOR VARIOUS WEIGHTS AND WHEN TO FEED.

| Baby's Weight |   | Requires for 1 day |   | Amount of each feeding and intervals between feeding. |   |   |   |   |    |   |
|---------------|---|--------------------|---|---|---|---|---|---|----|---|
| 6 pounds      |   | 14 ounces          |   | 2 ounces every 3 hours—7 feedings                     |   |   |   |   |    |   |
| 7             | " | 16                 | " | 2 $\frac{1}{4}$                                       | " | " | 3 | " | —7 | " |
|               |   |                    |   | or 3  | " | " | 4 | " | —5 | " |
| 8             | " | 18                 | " | 2 $\frac{1}{4}$                                       | " | " | 3 | " | —7 | " |
|               |   |                    |   | or 3  | " | " | 4 | " | —5 | " |
| 9             | " | 20                 | " | 2 $\frac{3}{4}$                                       | " | " | 3 | " | —7 | " |
|               |   |                    |   | or 4  | " | " | 4 | " | —5 | " |
| 10            | " | 22                 | " | 4 $\frac{1}{4}$                                       | " | " | 4 | " | —5 | " |
| 11            | " | 24                 | " | 5   | " | " | 4 | " | —5 | " |
| 12            | " | 26                 | " | 5 $\frac{1}{4}$                                       | " | " | 4 | " | —5 | " |
| 13            | " | 26                 | " | 5 $\frac{1}{4}$                                       | " | " | 4 | " | —5 | " |
| 14            | " | 28                 | " | 5 $\frac{1}{2}$                                       | " | " | 4 | " | —5 | " |
| 15            | " | 30                 | " | 6   | " | " | 4 | " | —5 | " |
| 16            | " | 32                 | " | 6 $\frac{1}{4}$                                       | " | " | 4 | " | —5 | " |
| 17            | " | 34                 | " | 6 $\frac{1}{2}$                                       | " | " | 4 | " | —5 | " |

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# The Victorian Order of Nurses

## Report of Nursing Service in Connection With The Laurentide Paper Company, Grand Mere, Quebec

BY EDITH HASLAM, R.N., VICTORIAN ORDER OF NURSES, SUPT.

THE District work is going on steadily and the nurses' reports show no cases of discharging eyes among the new-born infants this month. A decrease in the number of confinements attended by nurses is perhaps accounted for by the fact that, this being an unfortunate time, the \$3.00 fee cannot be met.

One feels that an important piece of welfare work in the homes could be done if this fee could be reduced this winter, as a valuable field is lost to the teaching of health and demonstration of the advantage of good nursing care for the mother and babe.

We are pleased to report a closer co-operation between our District work and our Child Hygiene Department and that an arrangement has been made whereby one of our French-speaking District nurses will go to the Victorian Order branch at Toronto for two weeks to observe how the bedside nursing care in the homes is being administered. This will raise the standard of our work in this branch of the service and with the large increase in the number of calls for the nurses we will be better able to show the public through the French nurses, the latest means of teaching preventive measures and thus lay a foundation for any further developments which may come about in the future.

The Child Welfare nurse is having a very busy time and is working in close co-operation with the Welfare Committee and much genuine distress is being relieved which otherwise would result in distressing conditions of ill-health and under-nourishment among the women and children.

"The Canadian Mother" book issued by the Federal Department of Health has been given away at the Clinic recently and our supply of both French and English copies soon became exhausted and a request for 500 more copies brought immediately a fresh supply. The French mothers are enthusiastic in their appreciation of the information given in this uplifting Canadian publication, the first of its kind offered for free distribution.

The room at the City Hall being used for the Clinic presents a very cosy atmosphere with its posters and model baby clothes, pro-



viding a very instructive afternoon for our mothers as well as kindling a healthy spirit of competition for better babies. Interested visitors are made welcome and the meetings are well attended in spite of the severe weather.

The School nursing has undergone a change this month. A Staff nurse was going to New York City to fulfil a previous engagement and it occurred to us that she might with advantage look over the school nursing there, as it is being rapidly developed along modern health lines and after two weeks' observation of this, she returned to us full of enthusiasm and eager to begin passing her new knowledge on. On visiting the school the first morning of her appointment as school nurse to the Protestant school, she was surprised to find a large number of children excluded because of whooping cough and other preventable causes, but she was encouraged to find a most sympathetic and open-minded attitude on the part of the Principal and teaching staff. Fearing the development of whooping cough into an epidemic, a conference of the School Management and the Chairman of the Nursing Committee, the Superintendent and the School Nurse was held, and a decision reached which closed the school for two days for disinfecting and cleaning. The new School nurse reports a splendid response to her attempt to instruct the parents in the "Prevention" and the family physicians were all most emphatic in their support and offers of co-operation in this work.

The Hospital continues to be used freely and the variety of cases is interesting this month.

We are particularly gratified to report two "appendectomies" both of which have done extremely well. One was a chronic case and the other a Laurentide employee who complained of acute pain for the first time in the morning and the operation was performed in the evening of the same day. He is now almost ready for discharge. Two women have undergone major operations and have made satisfactory progress. Two confinements were cared for during the month and a case of paratyphoid has returned home cured.

Minor surgery such as tonsils, adenoids, etc., is being carried on three days each week and the surgeons express themselves as satisfied with our service.

The eight-hour day for the nursing staff is proving well worth while, as the nurses are able to carry on work of a high standard without fatigue. Two of the regular hospital staff have been off duty; one has undergone a slight operation and is now almost able to resume duty and the other has completely recovered.

## News Notes

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In order to meet the needs of those who desire short courses of instruction in Radiology, the Faculty of Medicine of the University of Toronto have arranged to provide three courses a year of one month each at the Toronto General Hospital. Classes will be limited and an intensive schedule has been outlined to include:—

- (a) Radiographic Technique.
- (b) Interpretation.
- (c) Gastro-Intestinal Examination.

In these courses the entire resources of this large clinic will be placed at the disposal of the student in the most practical manner possible.

The tentative dates are as follows:—

1st Course—February 15th-March 15th, 1922.

2nd Course—Month of October, 1922.

3rd Course—Month of January, 1923.

For full information and terms apply to the Secretary, Faculty of Medicine, University of Toronto.

The Faculty of Medicine, University of Toronto, has instituted a graduate course leading to a Diploma in Radiology.

Candidates for the Diploma must (a) be graduates in Medicine of this University or some other University recognized for this purpose by the Senate; (b) have spent at least one year after graduation as an interne in a recognized hospital.

The Curriculum leading to the Diploma extends over one Winter session of eight months.

The Session will be devoted to courses in:—

- (a) Physics (3 hours daily) ;
- (b) Radiology.
  - 1. Technique,
  - 2. Anatomy,
  - 3. Pathology,
  - 4. Diagnosis,
  - 5. Radio-therapy.



Examinations on the subjects of the curriculum will be held at the end of the session.

Candidates who have passed the examinations and who present certificates of having satisfactorily completed the work specified will be granted the Diploma in Radiology.

Within the past year and a half 21 auxiliary and industrial classes for subnormal children have been established in the Public Schools of Toronto. Each class has an enrolment of 16 pupils under a specially trained teacher. These classes are doing remarkable work, and already the benefits derived from them are making this felt throughout the whole school system. Where auxiliary classes have been introduced, truancy in the school has been reduced. Mental defectives always contribute a large proportion of truants, because, lacking interest in the ordinary school routine and being unable to keep up with their classmates, they find truancy the easiest escape from their difficulties. The discipline of the schools has equally benefited. The individual teachers state that the removal of subnormal children from the grades enables them to devote all their time to the normal children. The defectives enrolled in auxiliary classes show an actual general improvement, and although intellectually much advancement cannot be hoped for, the progress noted comes through the enlargement of the sphere of general knowledge and experience. One-third of each school day in auxiliary classes is devoted to manual training for the boys and domestic arts for the girls.

The 21 classes at present in operation in Toronto are only a beginning. To adequately supply Toronto's needs at least 140 auxiliary and industrial classes are required. Lack of available class-room space is the problem at present, but it is hoped that by midsummer 10 or 12 classes can be added to the number already in existence. The work in Toronto is being carried forward under the Municipal Department of Health. In other parts of the province the Provincial Department of Education, working in conjunction with the Canadian National Committee for Mental Hygiene, has completed school surveys in Windsor Public and Separate Schools, Chatham Separate Schools, London Public and Separate Schools, Hamilton Separate Schools, and the Public Schools of St. Thomas, Kitchener, Woodstock, Guelph, St. Catharines, Oshawa, Belleville, and Kingston. Several of these cities have already organized and put into operation special classes to meet the needs of the problem cases brought to light by the surveys.

The Public Hospital for the Insane at New Westminster, B.C., is making preparations for the introduction of occupational therapy and industrial occupations among the women patients.

The Canadian National Committee for Mental Hygiene is conducting investigations in factories, for the purpose of collecting first-hand information concerning the relationship between certain mental abnormalities and industrial efficiency.

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In view of the very definite movement in Canada and the United States for the post-graduate education of the medical profession in various centres, a few words on the recent Medical Baby Week in Hamilton will probably be of interest to readers of the PUBLIC HEALTH JOURNAL.

It is recognized by many of the leaders in medical thought that no matter what changes take place in the present system of medical practice, the first essential is the provision for the well trained general man.

The Babies' Dispensary Guild in Hamilton has for more than ten years been conducting its work by the operation of clinics, a visiting nursing service for the babies who come under their observation, and a special relief work for those who are in urgent need. The Officers and members believe that this has become firmly established as a community necessity and that no stone should be left unturned which will further increase the efficiency of the work.

The Babies' Dispensary is rather unique in the fact that its origin came through the activities of a group of the medical profession. Later certain business men were interested who were asked to provide financial assistance for routine work of the Clinic, and subsequently, a Women's Board was formed which has assumed the responsibility for all the Social relief.

The Guild looks to the continued financial and moral support of the public in order to extend these facilities. In order to guarantee the highest standard of efficiency in the conduct and management of the cases coming under their care, it was deemed advisable to hold a Course in Pediatrics embracing the field of work undertaken by the Guild, and the Officers decided that it was well within their scope to stand behind the proposal financially.

Advantages were taken of the opportunity to secure the services of Dr. Wyman C. C. Cole of Detroit. Dr. Cole came to Hamilton highly recommended by Dr. Sedgewick of the Minnesota Graduate School, and was well qualified to present the western school of thought and their method in Pediatrics. The Course was



open to any graduate in medicine in good standing in his Local Medical Society. This Course, under the name of a Refresher Course in Pediatrics, was held October 24th-29th, 1921. The programme consisted of a series of clinical lectures and in addition to this, there was an informal dinner and public addresses to which the ladies and other guests were cordially invited. The following was the programme for the week:—

**Monday, Oct. 24th.—**

- 9.00 a.m.—Clinical Lecture: "Physical Examination and Normal Standards."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Anatomy and Physiology."

**Tuesday, Oct. 25th.—**

- 9.00 a.m.—Clinical Lecture: "Metabolic Diseases."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Breast Feeding."

**Wednesday, Oct. 26th.—**

- 9.00 a.m.—Clinical Lecture: "Convulsions."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Artificial Feeding."

**Thursday, Oct. 27th.—**

- 9.00 a.m.—Clinical Lecture: "Obscure Cases of Fever in Infancy."  
4.00 p.m.—Well Baby Clinic.  
8.15 p.m.—Round Table: "Disturbances of Nutrition."

**Friday, Oct. 28th.—**

- 9.00 a.m.—Clinical Lecture: "Tuberculosis and Syphilis."  
3.30 p.m.—Well Baby Clinic.  
6.15 p.m.—Informal Dinner and Public Addresses:  
    "Importance of Early Training, Physical and Mental,"  
        by Dr. W. C. C. Cole.  
    "Present Necessity for the Work of the Guild," by Dr.  
        Helen McMurchy.

**Saturday, Oct. 29th.—**

- 9.00 a.m.—Clinical Lectures:  
    "Disease of Anaphylactic Origin."  
    "Acidosis and the Role of Water in the Infantile  
        Organism."

This Course was attended by fifty-one members of the profession in Hamilton and Dundas. Interest and enthusiasm were maintained throughout the whole week and public interest aroused through frequent press notices.

The successes of this venture were most encouraging and can be thoroughly endorsed for imitation in other centres where it is considered necessary to arouse interest in new work or raise the standard of efficiency in clinics already in operation.

It proved an excellent method of obtaining the generous co-operation of the medical profession and the Officers of the Guild look forward with much assurance, when in the near future an appeal to the public will be made to supply the necessary assistance to enlarge the present scope of the work undertaken by the Guild.

In the coming Spring a campaign will be undertaken to augment the present Building Fund. Membership in the Guild will be encouraged, as well as larger contributions for this special purpose.

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## The Provincial Board of Health of Ontario

### COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF OCTOBER, 1921.

#### COMPARATIVE TABLE.

|                                 | 1921       |           | 1920       |           |
|---------------------------------|------------|-----------|------------|-----------|
|                                 | Cases      | Deaths    | Cases      | Deaths    |
| Small-pox .....                 | 16         | 0         | 310        | 1         |
| Scarlet Fever .....             | 354        | 15        | 387        | 3         |
| Diphtheria .....                | 685        | 56        | 711        | 45        |
| Measles .....                   | 16         | 3         | 290        | 3         |
| Whooping Cough .....            | 129        | 7         | 218        | 22        |
| Typhoid .....                   | 100        | 30        | 148        | 34        |
| Tuberculosis .....              | 176        | 98        | 152        | 130       |
| Infantile Paralysis .....       | 21         | 4         | 3          | 1         |
| Cerebro Spinal-Meningitis ..... | 4          | 4         | 6          | 4         |
| Influenza .....                 | 10         | 5         | 13         | 8         |
| Pneumonia .....                 | .....      | 129       | .....      | 142       |
|                                 | <hr/> 1511 | <hr/> 341 | <hr/> 2238 | <hr/> 393 |

### VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR OCTOBER, 1921.

|                  | Oct.<br>1921 | Oct.<br>1920 |
|------------------|--------------|--------------|
|                  | Cases        | Cases        |
| Syphilis .....   | 271          | 205          |
| Gonorrhoea ..... | 256          | 383          |
| Chancroid .....  | 4            | 19           |
|                  | <hr/> 531    | <hr/> 607    |

It is most gratifying to be able to report a marked reduction in the number of cases of communicable diseases in the Province for the month of October, compared with the corresponding month of 1920.

It may be observed the decrease in cases are 727 and in deaths 52.

With small-pox almost absent, and a considerable decrease in typhoid, measles, whooping cough and pneumonia the health of the Province may be considered satisfactory.

The increase in the deaths from scarlet fever and diphtheria, with fewer cases reported would indicate these diseases are of a more virulent type than existed in October, 1920, although the case mortality in diphtheria continues low being 8. in 100.

The Provincial Board of Health distributed free 46,109,000 units of diphtheria antitoxin to the districts where applications were made at a cost of \$6,916.00.

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## Editorial

A Toronto paper a few days ago published an interesting article on the value of eugenics. It is a pity that the word "eugenics" is not better understood for it means so much to the ordinary happiness or misery of every-day life. One of the newest uses to which this science of "eugenics" (for it is a science) is put, is in giving scientific advice to young couples contemplating marriage, as to the probable characteristics of their offspring and the establishment of parentage in cases of disputed legitimacy. These subjects were discussed recently at the American Museum of Natural History in New York, where authorities on the study of eugenics from many parts of Europe and America were gathered in the Second International Congress of Eugenics. Much research work has been done, and interesting light thrown on the manner in which musical, literary or artistic talent is handed down from generation to generation.

Major Leonard Darwin of London, a son of Charles Darwin, maintained that it is impossible to attempt to regulate human mating by legislation, and deplored the popular misconception of eugenics, which credited that science with a design to abolish romance and to introduce cattle-breeding principles into the domestic affairs of the human families. On the contrary, love marriages were extolled as natural eugenics, while marriages for money and other advantages were denounced as dysgenic, which means tending to deterioration of the race, instead of its improvement.

Although these questions of heredity and traits of character are important, it is not so much whether their prospective children will develop genius, as that they will inherit good health, that the average young couple are concerned with nowadays. With the increasing facilities for learning about hygienic principles, disease transmission and all the terrible aftermath that follows in the wake of venereal diseases, it is quite evident that intelligent people when thinking of marriage, will more and more inquire into the heredity and health of their partners-to-be.

Some of the inquiries made about such subjects are touching and show the mental worry and even anguish that often prepossesses young couples contemplating matrimony.

Dr. Evans of Chicago, who writes extensively on health topics, has been asked some very terse questions recently by a girl, and he

frankly states that he is puzzled to find a satisfactory reply. Here is what this girl writes:—"How is a young girl to know if it is right to marry a man in a town, who is supposed to have sowed oats once, the wild variety, and was laid up sick, so gossip goes, and who is not strong, but very nice, kind, generous, and anxious for a home and wife. No one will say what he had, or what he has, and would he ask me to marry him if he knew he was diseased? How can any clean girl know what she is getting when no one will say, and she can't ask him? All I know is learned from the movies—'Damaged Goods,' and 'Ghosts' and one of the older women in town told me he was 'unfit for marriage', and when I asked her why she changed the subject. I have no mother, and am only 18 and in perfect health. He seems to be crazy over me, but I don't love him enough to raise idiots, and bury a lot of innocent babes full of poison. On the other hand, I'd be the happiest girl alive to-day to know for sure if he is clean and healthy, for that suspicion is the only toad under my rosebush.

"Please tell me must I leap in the dark, as so many of my earthy sisters have done? To me good health and the joy of living make life. I can't bear to think of sickness and doctors' offices and undertakers and wreaths. It's hateful. I reason out—if he is diseased and I ask him if he will act the offended stunt, and where am I? Do they ever acknowledge it? Would I acknowledge it if it meant the losing of wife, home and happiness?

"Please tell me how I can tell? What are the danger signals? And I am writing in the twentieth century, too! What a thought! The dogs and live stock are far better off when it comes to mating, for human intelligence directs; we just blunder along and litter up the earth with half-wits."

Does not this seem a serious state of affairs? Public Health Education it is obvious, has still a long way to go before reaching the mass of the people—the very people who most need guidance and advice.

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# Notes on Current Literature

*From the Department of Information on Public Health, Canadian Red Cross Society*

## *Health Organization of the League of Nations.*

The Health Committee of the League of Nations is an expansion of the Office International d'Hygiène Publique, which has been operating at Paris since 1907. Dr. C. E. A. Winslow recounts the useful work of this committee of the League in international epidemics, the compilation of vital statistics and the control of the traffic in opium. ("Nation's Health," Nov., 1921, p. 594.)

## *Housing in Canada.*

One hundred and forty-six Canadian municipalities built 3,685 houses in 1920 with the aid of loans from the Federal and Provincial Governments. It is expected that a total of 5,000 houses will be reached during the present building season. ("Social Welfare," Oct. 1st, 1921, p. 6.)

## *Causes of Death in the United States.*

The United States Bureau of the Census reports a death-rate within the registration area in 1920 of 13.1 per 1,000 population as compared with 12.9 in 1919. Increases are shown in the death-rates for pneumonia, heart disease, cancer and automobile accidents. Marked decreases are reported for tuberculosis and influenza. ("U. S. Pub. Health Reports," Nov. 4th, 1921, p. 2723.)

## *Public Health in Ohio.*

A record of the progress made since 1917 when a reorganization took place of both state and local systems of health administration. The extension of public health nursing is noteworthy. ("Journ. American Med. Assn.," Nov. 19th, 1921, p. 1639.)

## *The School Child's Health.*

Education involves a severe strain upon the physical and mental resources of the growing child. This article explains how school medical service and health instruction will increase the child's progress in school and its protection from disease and may actually be the means of saving life. ("Public Health," Sept.-Oct., 1921, p. 316.)

*Sleep Requirements of Children.*

A leaflet issued by the Medical Department of the London County Council for the instruction of parents regarding the sleep requirements of children. ("Public Health," Sept.-Oct., 1921, p. 338.)

*Health Catechism.*

A series of questions and answers on health for teachers of hygiene to children in junior grades. ("Virginia Health Bulletin," Oct., 1921, p. 3485.)

*Alcohol and Health Ideals.*

Dr. Lyman Fisk, Medical Director of the Life Extension Institute, discusses the question of the use of alcohol in relation to the health and vitality of mankind. He cites the testimony of laboratory investigation and life insurance experience against the customary use of alcohol and asks that prohibition be given a fair and thorough trial. ("The Medical Officer," Oct. 22nd, 1921, p. 177.)

*Education in Tuberculosis.*

Standards recommended by the National League of Nursing Education for the instruction of student nurses in the theory and practice of tuberculosis nursing. There is a definite need by nurses for a knowledge of tuberculosis, in order that they may play an intelligent part in the educational campaign for the eradication of this disease. ("The Amcn. Journ. of Nursing," Nov., 1921, p. 98.)

*Vitamines.*

The Health Officer of Manchester gives some simple instructions for the use of health visitors who require to give elementary teaching on this subject. ("The Medical Officer," Nov. 5th, 1921, p. 199.)

"The Little Blue Books," issued by the Department of Health of Canada, Ottawa. Copies in French and English may be obtained on request to the Deputy Minister of Health, Ottawa.

1. Good Wishes for you from Canada.
2. How to Build the Canadian House.
3. How to Make our Canadian Home.
4. How to Make Outpost Homes in Canada.
5. Canadians Need Milk.
6. How we Cook in Canada.



7. How to Manage Housework in Canada.
8. How to Take Care of Mother.
9. How to Take Care of the Family.
10. How to Take Care of the Baby.
11. How to Take Care of the Children.
12. Household Cost Accounting in Canada.
13. How to Take Care of Household Waste.
14. How to Avoid Accidents and Give First Aid.

*"Plant and Animal Children,"* by Ellen Torelle.

*"The Spark of Life,"* by Margaret W. Morley.

*"The Way Life Begins,"* by B. C. and V. M. Cady.

The three foregoing books describe the growth and development of plant and animal life and show the relation of these facts to human life. The books are written especially for children and should assist those who seek to give sex education by means of nature study.

*Experimental Rickets*, by the Medical Research Council of Great Britain. The experimental work and results described in this paper are the outcome of an investigation into the cause of rickets extending over the last five years.

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# Abstract Service

## AMERICAN SOCIAL HYGIENE ASSOCIATION.

*Further Clinical Studies on the Use of Mercurochrome as a General Germicide.* By Hugh H. Young, M.D., Edwin C. White, M.D., and Ernest O. Swartz, M.D. The Journal of the American Medical Association, Vol. 77, No. 2, July 9, 1921.

Since the publication in 1919 of the preliminary laboratory and clinical study of "Mercurochrome-220," this compound has been used extensively in many urologic conditions in the Brady Urological Institute and in other genito-urinary services and dispensaries. It has been used as a germicide in dealing with diphtheria carriers and in oral pathological cases as well.

After two years of experience with mercurochrome, the authors have come to the following conclusions:

1. Mercurochrome has proved to be a very valuable drug in acute gonorrhoea, but the intense stain is a drawback to its use as an injection by the patient. Acriflavine is free from this objection, and although not so good a germicide, is often preferable in acute cases.

2. In chronic infections of the urethra, prostate, and vesicles, the great value of mercurochrome has been proved. It penetrates deeply and may be found in the prostatic secretion several days after posterior instillation.

3. The results obtained in many cases of chronic cystitis are remarkable, long standing infections often clearing up in a few treatments. In some cases which fail to become sterile, constant reinfection of the bladder is found to occur from kidneys or prostate.

4. Mercurochrome is less irritating and produces less reaction in the renal pelvis than silver nitrate solutions, while possessing about equal germicidal powers, but in some cases both drugs should be used alternately, and sometimes silver is better.

5. In some cases of pyelitis, the infection comes from the teeth, tonsils, etc., and sterilization of the pelvis is impossible until the primary focus is cured.

6. Continued use has proved it to be a most satisfactory dressing for venereal ulcerations and buboes.

7. In general surgery, reports indicate that mercurochrome is very valuable in dressing open wounds and sinuses.

8. The germicidal efficiency of the drug in other branches of medicine and surgery has been proved, especially in the treatment



of infections of the throat, nose, sinuses, ear, eye and teeth. It is reported to be the most efficient in disinfecting throats of diphtheria carriers.

*Present Opinions of Intraspinal Therapy in Neurosyphilis.* Eugene Bourdreau, M.D. *Medical Record*, Vol. 100, No. 13, September 24, 1921.

The author states that the purpose of this paper is to try to remove some difficulties and to help to clear thinking in the problem of neuro-syphilis. To this end he utilized the opinions of various authorities in the field. Fildes, Swift, Sachs, Stoner, Dercum, and Fordyce are quoted extensively.

It would appear from the material in hand that it is safe to accept the following conclusions:

1. The central nervous system is early invaded by the *treponema pallidum*, and without necessarily giving clinical signs.

2. Vigorous intravenous salvarsen treatment associated with mercury and the iodides removes the danger in a larger number of cases. This must be confirmed by negative findings in the cerebrospinal fluid.

3. Certain cases do not respond to this treatment alone.

4. For these cases the best treatment so far devised, but not ideal, is by the Swift-Ellis-Ogilvie method because various observers agree that clinical evidence shows it to be beneficial and the laboratory evidence is that in all but potential paretics the signs become negative if thoroughly carried out, and because both avenues of approach are employed.

5. That the method of Byrnes (mercurialized serum) is more dangerous and produces severe reactions.

6. That the drainage method of Dercum is not without danger, is extremely painful, and the results obtained by observers are not in agreement.

*An X-Ray Study of the Progressive Changes in the Lungs and Aorta in Tuberculosis with Syphilis.* By Cleaveland Floyd, H. K. Boutwell, and R. L. Leonard. *The American Review of Tuberculosis*, Vol. V., No. 7, September, 1921.

For detection of pulmonary syphilis the X-ray is a valuable adjunct, as few of these lesions come to autopsy and the condition must be demonstrated by clinical methods. Pulmonary syphilis consists of a symptom-complex of history, positive Wassermann test, extrapulmonary lesions, continued negative sputum for the tubercle bacillus, and pulmonary signs found at the base or toward

the hilum. The effect of an intercurrent syphilitic infection upon an established pulmonary tuberculosis is that of stimulation of the production of fibroid tissue formation.

The routine Wassermann test in the clinic of the Boston Consumptive Hospital has shown that 8 per cent. of the male patients have syphilis. Of these cases, 50 have had X-ray examinations over a period of years, during which time they have been treated more or less extensively for syphilis. Only two cases were fairly typical of pulmonary syphilis.

The following conclusions are drawn:

1. Every case having tuberculosis and syphilis combined should be given intensive syphilitic treatment, more especially if the lesion is not typically one of tuberculosis.
2. The presence of syphilis may at times considerably aid the production of fibrous tissue in the lung.
3. Syphilitic dilation of the aortic arch, even in well marked instances may be improved by prolonging intensive antisiphilitic treatment.

\* \* \* \* \*

Apropos the above subject, an article in the June, 1921, issue of the *New York Medical Journal*, by H. N. Ninton, contained the following interesting facts:

1. Syphilis of the apices of the lungs is not by any means a rare condition and there are many cases of this disease being treated for pulmonary tuberculosis.
2. The Wassermann and other blood tests should be used more extensively in private practice in cases giving signs and symptoms of active tuberculosis, but not giving positive sputum. By so doing, many cases which are running a rapidly downward course would be arrested.

W. W. Watkins, in an article in the May, 1921, number of the *American Journal of Roentgenology*, made the following comments in regard to the same subject:

1. In the treatment of systemic lues, it is important to know whether the lungs are involved, since a Herxheimer reaction in the lungs may be serious.
2. It is important in tuberculosis to ascertain whether the patients combat this comparatively benign single infection or whether a sinister combination with active syphilis must be treated.
3. It may be triply important not to disturb the fibrotic changes of latent syphilis by arsenical treatment, if the tendency of this fibrosis is to arrest the tuberculosis.



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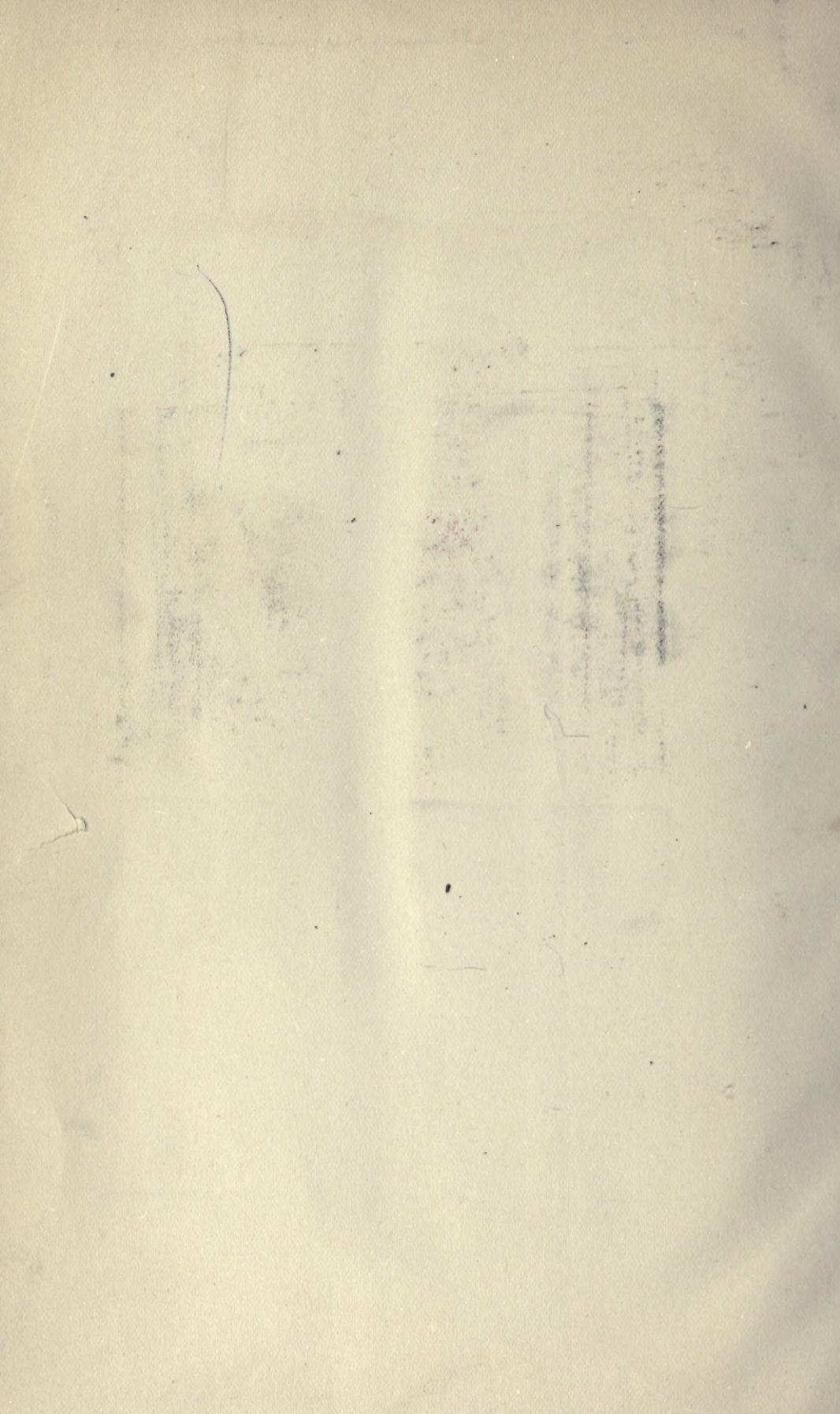














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